

11-2023

University of Arkansas, Chemistry and Biochemistry Department Research Publications, 2014- November 2023. 107p.

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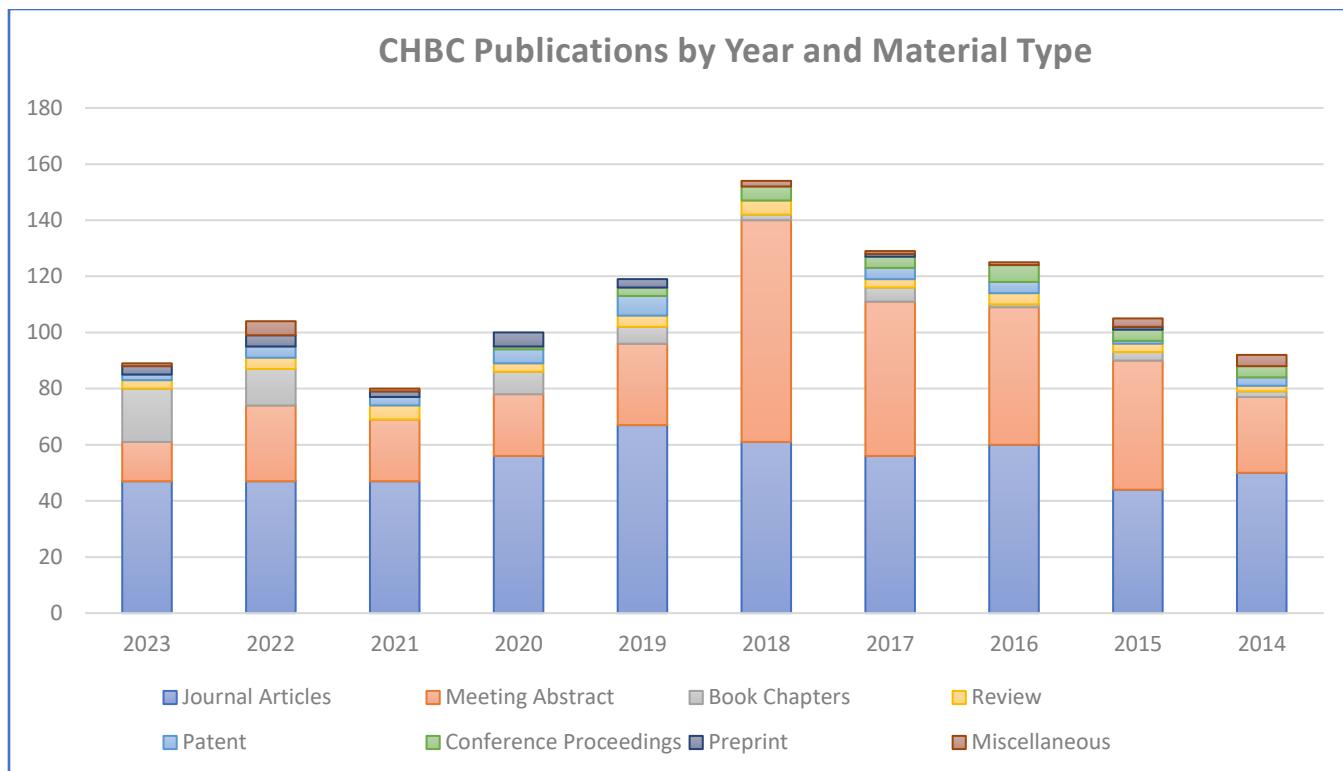
University of Arkansas, Chemistry and Biochemistry Department Research Publications, 2014- November 2023

Introduction

This report contains publications by CHBC faculty and researchers for 2014-November 2023. The information was gathered from major databases in science and technology including Web of Science, SciFinder, Reaxys, PubMed, IEEE Explore and Engineering Index. At least one author in each of the publications has the CHBC department as its affiliation.

CHBC Research Publications 2014-November 2023						
Type	No.	2023	2022	2021	2020	2019
Journal Articles	535	47	47	47	56	67
Miscellaneous	18	1	5	1	0	0
Meeting Abstract	370	14	27	22	22	29
Book Chapters	59	19	13	0	8	6
Review	36	3	4	5	3	4
Patent	33	2	4	3	5	7
Conference Proceedings	27	0	0	0	1	3
Preprint	19	3	4	2	5	3
Total	1097	89	104	80	100	119

CHBC Research Publications 2014-November 2023 (Cont'd)						
Type	#	2018	2017	2016	2015	2014
Journal Articles	535	61	56	60	44	50
Miscellaneous	18	2	1	1	3	4
Meeting Abstract	370	79	55	49	46	27
Book Chapters	59	2	5	1	3	2
Review	36	5	3	4	3	2
Patent	33	0	4	4	1	3
Conference Proceedings	27	5	4	6	4	4
Preprint	19	0	1	0	1	0
Total	1097	154	129	125	105	92



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Preprints (n=19)	106

Publications (n=1098)

Journal Article (n=536)

2023 (n=47) – up to November

- (1) Acharya, P.; Hong, J. Y.; Manso, R.; Hoffman, A. S.; Kekedy-Nagy, L.; Chen, J. Y.; Bare, S. R.; Greenlee, L. F. Temporal Ni K-Edge X-ray Absorption Spectroscopy Study Reveals the Kinetics of the Ni Redox Behavior of the Iron-Nickel Oxide Bimetallic OER Catalyst. *Journal of Physical Chemistry C* **2023**, *127*, 11891-11901, Article. DOI: 10.1021/acs.jpcc.3c03480.
- (2) Ahmadzadeh, S.; Hettiarachchy, N.; Luthra, K.; Chen, J.; Seo, H.-S.; Atungulu, G. G.; Ubeyitogullari, A. Effects of polyphenol-rich grape seed and green tea extracts on the physicochemical properties of 3D-printed edible soy protein films. *Food Packaging and Shelf Life* **2023**, *40*, 101184, Article. DOI: 10.1016/j.fpsl.2023.101184.
- (3) Amirabad, T. N.; Ensafi, A. A.; Mousaabadi, K. Z.; Rezaei, B.; Demir, M. Binder-free engineering design of Ni-MOF ultrathin sheet-like grown on PANI@GO decorated nickel foam as an electrode for in hydrogen evolution reaction and asymmetric supercapacitor. *International Journal of Hydrogen Energy* **2023**, *48* (76), 29471-29484, Article. DOI: 10.1016/j.ijhydene.2023.04.159.
- (4) Anderson, K. L.; Edwards, M. A. Evaluating Analytical Expressions for Scanning Electrochemical Cell Microscopy (SECCM). *Analytical Chemistry* **2023**, *95* (21), 8258-8266, Article. DOI: 10.1021/acs.analchem.3c00216.
- (5) Badiee, S. A.; Isu, U. H.; Khodadadi, E.; Moradi, M. The Alternating Access Mechanism in Mammalian Multidrug Resistance Transporters and Their Bacterial Homologs. *Membranes* **2023**, *13* (6), 31, Article. DOI: 10.3390/membranes13060568.
- (6) Batey, J. E.; Yang, M.; Giang, H.; Dong, B. Ultrahigh-Throughput Single-Particle Hyperspectral Imaging of Gold Nanoparticles. *Analytical Chemistry* **2023**, *95* (13), 5479-5483, Article. DOI: 10.1021/acs.analchem.2c05336.
- (7) Benton, M.; Furr, M.; Kumar, V. G.; Polasa, A.; Gao, F.; Heyes, C. D.; Kumar, T. K. S.; Moradi, M. cpSRP43 Is Both Highly Flexible and Stable: Structural Insights Using a Combined Experimental and Computational Approach. *Journal of Chemical Information and Modeling* **2023**, *63* (13), 4125-4137, Article. DOI: 10.1021/acs.jcim.3c00319.
- (8) Cherry, R.; Muhanga, J. J.; Mehrabi, H.; Conlin, S. K.; Coridan, R. H. Monolithic light concentration by core-shell TiO₂ nanostructures templated by monodisperse polymer colloidal monolayers. *Nanotechnology* **2023**, *34* (34), 10, Article. DOI: 10.1088/1361-6528/acd787.
- (9) DeMoulpied, J. R.; Killenbeck, J. A.; Schichtl, Z. G.; Sharma, B.; Striegler, S.; Coridan, R. H. Characterizing the Solvent-Induced Inversion of Colloidal Aggregation During Electrophoretic Deposition. *Advanced Materials Interfaces* **2023**, *10* (5), Article. DOI: 10.1002/admi.202201779.

- (10) Diaz Perez, A.; Pysz, P. M.; Usdrowski, H.; Hunter, V. K.; Stenken, J. A. Attachment and optimization of *Staphylococcus aureus*, *Staphylococcus epidermidis*, and *Pseudomonas aeruginosa* biofilms to a 3D printed lattice. *Journal of Microbiological Methods* **2023**, *204*, Article. DOI: 10.1016/j.mimet.2022.106644.
- (11) Dolatyari, V.; Shahsavari, H. R.; Fereidoonnezhad, M.; Farhadi, F.; Akhlaghi, S.; Latouche, C.; Sakamaki, Y.; Beyzavi, H. Luminescent Heterobimetallic Pt-II-Au-I Complexes Bearing N-Heterocyclic Carbenes (NHCs) as Potent Anticancer Agents. *Inorganic Chemistry* **2023**, *12*, Article. DOI: 10.1021/acs.inorgchem.3c01504.
- (12) Emran, A.; Chevrier, V. F. Discrepancy in Grain Size Estimation of H₂O Ice in the Outer Solar System. *Research in Astronomy and Astrophysics* **2023**, *23* (3), Article. DOI: 10.1088/1674-4527/acb9db.
- (13) Emran, A.; Ore, C. M. D.; Ahrens, C. J.; Khan, M. K. H.; Chevrier, V. F.; Cruikshank, D. P. Pluto's Surface Mapping Using Unsupervised Learning from Near-infrared Observations of LEISA/Ralph. *Planetary Science Journal* **2023**, *4* (1), Article. DOI: 10.3847/psj/acb0cc.
- (14) Faddis, R.; Du, S.; Stewart, J.; Hasan, M. M.; Lewit, N.; Ali, M. A.; White, C. B.; Okoto, P.; Thallapuram, S.; Halim, M. A. Molecular Modelling, Synthesis, and In-Vitro Assay to Identify Potential Antiviral Peptides Targeting the 3-Chymotrypsin-Like Protease of SARS-CoV-2. *International Journal of Peptide Research and Therapeutics* **2023**, *29* (5), 13, Article. DOI: 10.1007/s10989-023-10563-w.
- (15) Farnsworth, K. K.; Soto, A.; Chevrier, V. F.; Steckloff, J. K.; Soderblom, J. M. Floating Liquid Droplets on the Surface of Cryogenic Liquids: Implications for Titan Rain. *ACS Earth and Space Chemistry* **2023**, *7* (2), 439-448, Article. DOI: 10.1021/acsearthspacechem.2c00311.
- (16) Farshadnia, M.; Ensafi, A. A.; Mousaabadi, K. Z.; Rezaei, B.; Demir, M. Facile synthesis of NiTe₂-Co₂Te₂@rGO nanocomposite for high-performance hybrid supercapacitor. *Scientific Reports* **2023**, *13* (1), Article. DOI: 10.1038/s41598-023-28581-5.
- (17) Farzinpour, F.; Ensafi, A. A.; Mousaabadi, K. Z.; Rezaei, B. Synthesis of vanadium metal-organic framework, characterization, and study of electrochemical properties for using in supercapacitor and oxygen evolution reaction. *Fuel* **2023**, *341*, Article. DOI: 10.1016/j.fuel.2023.127724.
- (18) Ghane, M. A.; Wei, W.; Yakout, D. W.; Allen, Z. D.; Miller, C. L.; Dong, B.; Yang, J. J.; Fang, N.; Mabb, A. M. Arc ubiquitination regulates endoplasmic reticulum-mediated Ca²⁺ release and CaMKII signaling. *Frontiers in Cellular Neuroscience* **2023**, *17*, Article. DOI: 10.3389/fncel.2023.1091324.
- (19) Goolsby, C.; Losey, J.; Fakharzadeh, A.; Xu, Y. C.; Duker, M. C.; Sherman, M. G.; Matteson, D. S.; Moradi, M. Addressing the Embeddability Problem in Transition Rate Estimation. *Journal of Physical Chemistry A* **2023**, *127* (27), 5745-5759, Article. DOI: 10.1021/acs.jpca.3c01367.
- (20) Havens, J.; Su, T.; Wang, Q.; Yu, C.-A.; Yu, L.; Durham, B.; Millett, F. Photoinduced electron transfer in cytochrome bc₁: Dynamics of rotation of the Iron-sulfur protein during bifurcated electron transfer from ubiquinol to cytochrome c₁ and cytochrome bL. *Biochimica et Biophysica Acta-Bioenergetics* **2023**, *1864* (2), Article. DOI: 10.1016/j.bbabi.2023.148957.
- (21) Isu, U. H.; Badiiee, S. A.; Khodadadi, E.; Moradi, M. Cholesterol in Class C GPCRs: Role, Relevance, and Localization. *Membranes* **2023**, *13* (3), Article. DOI: 10.3390/membranes13030301.

- (22) Karimi, A.; Ensafi, A. A.; Rezaei, B. Design and fabrication of MOF-derived leaf-like Zn-Co-S nanosheet arrays decorated with Ni-Zn-P ultrathin nanostructure for hybrid supercapacitors. *Fuel* **2023**, *334*, 13, Article. DOI: 10.1016/j.fuel.2022.126536.
- (23) Khosropour, H.; Saboohi, M.; Keramat, M.; Rezaei, B.; Ensafi, A. A. Electrochemical molecularly imprinted polymer sensor for ultrasensitive indoxacarb detection by tin disulfide quantum dots/carbon nitride/multiwalled carbon nanotubes as a nanocomposite. *Sensors and Actuators B-Chemical* **2023**, *385*, 8, Article. DOI: 10.1016/j.snb.2023.133652.
- (24) Kumar, V. G.; Polasa, A.; Agrawal, S.; Kumar, T. K. S.; Moradi, M. Binding affinity estimation from restrained umbrella sampling simulations. *Nature Computational Science* **2023**, *3* (1), 59-70, Article. DOI: 10.1038/s43588-022-00389-9.
- (25) Levey, K. J.; Edwards, M. A.; White, H. S.; Macpherson, J. V. Simulation of the cyclic voltammetric response of an outer-sphere redox species with inclusion of electrical double layer structure and ohmic potential drop. *Physical Chemistry Chemical Physics* **2023**, *25* (11), 7832-7846, Article. DOI: 10.1039/d3cp00098b.
- (26) Lowenthal, R.; Taylor, M.; Gidden, J. A.; Heflin, B.; Lay, J. O., Jr.; Avaritt, N.; Tackett, A. J.; Urbaniak, A. The mycelium of the *Trametes versicolor* synn. *Coriolus versicolor* (Turkey tail mushroom) exhibit anti-melanoma activity in vitro. *Biomedicine & Pharmacotherapy* **2023**, *161*, Article. DOI: 10.1016/j.biopha.2023.114424.
- (27) Mehrabi, H.; Conlin, S. K.; Hollis, T. I.; Gattis, B. S.; Weker, J. N.; Coridan, R. H. Electrochemical Control of the Morphology and Functional Properties of Hierarchically Structured, Dendritic Cu Surfaces. *Energy Technology* **2023**, *11* (3), Article. DOI: 10.1002/ente.202201124.
- (28) Mehrabi, H.; Schichtl, Z. G.; Conlin, S. K.; Coridan, R. H. Modular Solar-to-Fuel Electrolysis at Low Cell Potentials Enabled by Glycerol Electrooxidation and a Bipolar Membrane Separator. *ACS Applied Materials & Interfaces* **2023**, *15* (38), 44953-44961, Article. DOI: 10.1021/acsami.3c09016.
- (29) Mosallaei, H.; Hadadzadeh, H.; Ensafi, A. A.; Mousaabadi, K. Z.; Weil, M.; Foelske, A.; Sauer, M. Evaluation of HER and OER electrocatalytic activity over RuO₂-Fe₂O₃ nanocomposite deposited on HrGO nanosheets. *International Journal of Hydrogen Energy* **2023**, *48* (5), 1813-1830, Article. DOI: 10.1016/j.ijhydene.2022.10.026.
- (30) Mousaabadi, K. Z.; Ensafi, A. A.; Rezaei, B. Electrochemical Sensor for the Determination of Methotrexate Based on MOF-Derived NiO/Ni@C-Poly(isonicotinic acid). *Industrial & Engineering Chemistry Research* **2023**, *62* (11), 4603-4610, Article. DOI: 10.1021/acs.iecr.2c03091.
- (31) Mousavi, N.; Ensafi, A. A.; Mousaabadi, K. Z.; Hadadzadeh, H. Synthesis of quinacridone derivative supported on ZnO hexagonal as a new electrocatalyst for hydrogen evolution reaction. *Journal of Electroanalytical Chemistry* **2023**, *928*, Article. DOI: 10.1016/j.jelechem.2022.117029.
- (32) Mousavi, N.; Hadadzadeh, H.; Ensafi, A. A.; Farrokhpour, H.; Mousaabadi, K. Z. Electrocatalytic and photocatalytic activity of a nickel (II) quinacridone complex. *Materials Chemistry and Physics* **2023**, *303*, 10, Article. DOI: 10.1016/j.matchemphys.2023.127823.

- (33) Nguyen, A. T.; Baucom, D. R.; Wang, Y.; Heyes, C. D. Compact, Fast Blinking Cd-Free Quantum Dots for Super-Resolution Fluorescence Imaging. *Chemical & Biomedical Imaging* **2023**, *1* (3), 251-259, Article. DOI: 10.1021/cbmi.3c00018.
- (34) Pysz, P. M.; Hoskins, J. K.; Zou, M.; Stenken, J. A. 3D Printed Customizable Microsampling Devices for Neuroscience Applications. *ACS Chemical Neuroscience* **2023**, *14* (18), 3278-3287, Article. DOI: 10.1021/acschemneuro.3c00166.
- (35) Rubinelli, P. M.; Liyanage, R.; Lay, J.; Acuff, J. C. The Bactericidal Activity of a Novel Aneurinibacillus aneurinilyticus Isolate Effectively Controls Foodborne Pathogens *Campylobacter jejuni* and *Listeria monocytogenes*. *Applied Sciences-Basel* **2023**, *13* (18), 23, Article. DOI: 10.3390/app131810257.
- (36) Russell, B.; Rogers, A.; Yoder, R.; Kurilich, M.; Krishnamurthi, V. R.; Chen, J. Y.; Wang, Y. Silver Ions Inhibit Bacterial Movement and Stall Flagellar Motor. *International Journal of Molecular Sciences* **2023**, *24* (14), 17, Article. DOI: 10.3390/ijms241411704.
- (37) Russell, B.; Rogers, A.; Yoder, R.; Kurilich, M.; Krishnamurthi, V. R.; Chen, J.; Wang, Y. Silver Ions Inhibit Bacterial Movement and Stall Flagellar Motor. *International Journal of Molecular Sciences* **2023**, *24* (14), 11704, Article. DOI: 10.3390/ijms241411704.
- (38) Salandari-Jolge, N.; Ensafi, A. A.; Rezaei, B. A copper oxide nanorod derived metal-organic framework nanocomposite: a robust and sensitive electrocatalyst for the detection of furazolidone. *New Journal of Chemistry* **2023**, *47* (2), 666-673, Article. DOI: 10.1039/d2nj04823j.
- (39) Salehan, P.; Ensafi, A. A.; Andikaey, Z.; Rezaei, B. H-CoNiSe₂/NC dodecahedral hollow structures for high-performance supercapacitors. *Scientific Reports* **2023**, *13* (1), 13, Article. DOI: 10.1038/s41598-023-29398-y.
- (40) Samaraweera, H.; Andrena, D.; Carter, K.; Felder, T.; Nawalage, S.; Chui, I. W.; Perez, F.; Khan, A.; Mlsna, T. Green iron oxide-modified biochar for methylene blue removal from aqueous solutions. *Groundwater for Sustainable Development* **2023**, *21*, Article. DOI: 10.1016/j.gsd.2023.100945.
- (41) Sharma, B.; Striegler, S. Nanogel Catalysts for the Hydrolysis of Underivatized Disaccharides Identified by a Fast Screening Assay. *ACS Catalysis* **2023**, *13* (3), 1614-1620, Article. DOI: 10.1021/acscatal.2c05575.
- (42) Sharma, H. S.; Feng, L. Y.; Chen, L.; Huang, H. Y.; Tian, Z. R.; Nozari, A.; Muresanu, D. F.; Lafuente, J. V.; Castellani, R. J.; Wiklund, L.; et al. Cerebrolysin Attenuates Exacerbation of Neuropathic Pain, Blood-spinal Cord Barrier Breakdown and Cord Pathology Following Chronic Intoxication of Engineered Ag, Cu or Al (50-60 nm) Nanoparticles. *Neurochemical Research* **2023**, *48*, 1864-1888, Article. DOI: 10.1007/s11064-023-03861-8.
- (43) Shrestha, D.; Ou, J.; Rogers, A.; Jereb, A.; Okyere, D.; Chen, J. Y.; Wang, Y. Bacterial mobility and motility in porous media mimicked by microspheres. *Colloids and Surfaces B-Biointerfaces* **2023**, *222*, 9, Article. DOI: 10.1016/j.colsurfb.2023.113128.
- (44) Soosani, Z.; Rezaei, B.; Heydari-Bafrooei, E.; Ensafi, A. A. Chemical Sensors Based on Molecularly Imprinted Polymers Can Determine Drug Release Kinetics from Nanocarriers without Filtration, Centrifugation, and Dialysis Steps. *ACS Sensors* **2023**, *8* (5), 1891-1900, Article. DOI: 10.1021/acssensors.2c02436.

- (45) Tran, R.; Canote, C. A.; Kilyanek, S. M. Mechanistic Studies of the Deoxydehydration of Polyols Catalyzed by a Mo(VI) Dioxo(pyridine-2,6-dicarboxylato) Complex. *Organometallics* **2023**, *42* (11), 1190-1197, Article. DOI: 10.1021/acs.organomet.3c00001.
- (46) Weldon, R.; Wang, F. Simulating a flexible water model as rigid: Best practices and lessons learned. *Journal of Chemical Physics* **2023**, *158* (13), Article. DOI: 10.1063/5.0143836.
- (47) Yuan, Y.; Wang, F. Dipole Cooperativity and Polarization Frustration Determine the Secondary Structure Distribution of Short Alanine Peptides in Water. *Journal of Physical Chemistry B* **2023**, *127* (14), 3126-3138, Article. DOI: 10.1021/acs.jpcb.2c07947.

2022 (n=48)

- (1) Acharya, P.; Manso, R. H.; Hoffman, A. S.; Bakovic, S. I. P.; Kekedy-Nagy, L.; Bare, S. R.; Chen, J.; Greenlee, L. F. Fe Coordination Environment, Fe-Incorporated Ni(OH)(2) Phase, and Metallic Core Are Key Structural Components to Active and Stable Nanoparticle Catalysts for the Oxygen Evolution Reaction. *ACS Catalysis* **2022**, *12* (3), 1992-2008, Article. DOI: 10.1021/acscatal.1c04881.
- (2) Al-Ogaidi, I.; Aguilar, Z. P.; Lay, J. O., Jr. Development of Biodegradable/Biocompatible Nanoliposome-Encapsulated Antimicrobial Essential Oils for Topical Creams and Gels. *ACS Omega* **2022**, *7* (27), 23875-23889, Article. DOI: 10.1021/acsomega.2c02594.
- (3) Amirabad, T. N.; Ensafi, A. A.; Rezaei, B. Boosting supercapacitor performance by in-situ modification of binder-free electrodes with green synthesized Zn-doped Fe₂O₃ nanoparticles on 2D-MoS₂@rGO nanosheets. *Fuel* **2022**, *330*, Article. DOI: 10.1016/j.fuel.2022.125645.
- (4) Andikaey, Z.; Ensafi, A. A.; Rezaei, B.; Hu, J. S. CoNiSe₂/Fe-CoNiSe₂ yolk-shell nanoboxes from metal-organic frameworks for high-performance supercapacitor. *Electrochimica Acta* **2022**, *417*, Article. DOI: 10.1016/j.electacta.2022.140338.
- (5) Andikaey, Z.; Ensafi, A. A.; Rezaei, B.; Hu, J. S. Nickel/cobalt/copper sulfide dodecahedral hollow multi-shelled structures, characterization, and application as a suitable nanomaterial for high-performance supercapacitors. *Electrochimica Acta* **2022**, *420*, Article. DOI: 10.1016/j.electacta.2022.140437.
- (6) Araujo, J.; Ottinger, S.; Venkat, S.; Gan, Q.; Fan, C. Studying Acetylation of Aconitase Isozymes by Genetic Code Expansion. *Frontiers in Chemistry* **2022**, *10*, Article. DOI: 10.3389/fchem.2022.862483.
- (7) Balaghi, S. E.; Heidari, S.; Benamara, M.; Beyzavi, H.; Patzke, G. R. Fluoride etched Ni-based electrodes as economic oxygen evolution electrocatalysts. *International Journal of Hydrogen Energy* **2022**, *47* (3), 1613-1623, Article. DOI: 10.1016/j.ijhydene.2021.10.127.
- (8) Bisly, A. A.; Hettiarachchy, N. S.; Kumar, T. K. S.; Lay, J. O., Jr. Antioxidant activities of solid-state fermentation derived proteins and peptides from heat-stabilized defatted rice bran. *Journal of the American Oil Chemists Society* **2022**, *99* (3), 215-228, Article. DOI: 10.1002/aocs.12558.

- (9) Brand, S. E.; Scharlau, M.; Geren, L.; Hendrix, M.; Parson, C.; Elmendorf, T.; Neel, E.; Pianalto, K.; Silva-Nash, J.; Durham, B.; et al. Accelerated Evolution of Cytochrome c in Higher Primates, and Regulation of the Reaction between Cytochrome c and Cytochrome Oxidase by Phosphorylation. *Cells* **2022**, *11* (24), Article. DOI: 10.3390/cells11244014.
- (10) Chau, C.; Marcuccio, F.; Soulias, D.; Edwards, M. A.; Tuplin, A.; Radford, S. E.; Hewitt, E.; Actis, P. Probing RNA Conformations Using a Polymer-Electrolyte Solid-State Nanopore. *ACS Nano* **2022**, *16* (12), 20075-20085, Article. DOI: 10.1021/acsnano.2c08312.
- (11) Chen, H. C.; Ogden, D.; Pant, S.; Cai, W. S.; Tajkhorshid, E.; Moradi, M.; Roux, B.; Chipot, C. A Companion Guide to the String Method with Swarms of Trajectories: Characterization, Performance, and Pitfalls. *Journal of Chemical Theory and Computation* **2022**, *18* (3), 1406-1422, Article. DOI: 10.1021/acs.jctc.1c01049.
- (12) Chen, H.; Ogden, D.; Pant, S.; Cai, W.; Tajkhorshid, E.; Moradi, M.; Roux, B.; Chipot, C. A Companion Guide to the String Method with Swarms of Trajectories: Characterization, Performance, and Pitfalls. *Journal of Chemical Theory and Computation* **2022**, *18* (3), 1406-1422, Article. DOI: 10.1021/acs.jctc.1c01049.
- (13) Chevrier, V. F.; Fitting, A.; Elsenousy, A.; Rivera-Valentin, E. G. Thermodynamic modelling of perchlorate/chloride and perchlorate/chlorate deliquescence at Mars-relevant temperatures. *Geochimica Et Cosmochimica Acta* **2022**, *333*, 56-74, Article. DOI: 10.1016/j.gca.2022.06.011.
- (14) Emran, A.; Chevrier, V. F. Uncertainty in Grain Size Estimations of Volatiles on Trans-Neptunian Objects and Kuiper Belt Objects. *Astronomical Journal* **2022**, *163* (5), Article. DOI: 10.3847/1538-3881/ac559f.
- (15) Ensa, A. A.; Fazel, R.; Rezaei, B.; Hu, J. S. Copper-nickel rubeanate metal-organic framework, a new highly stable and long active life nanocomposite for high-performance supercapacitors. *Journal of Materomics* **2022**, *8* (4), 843-851, Article. DOI: 10.1016/j.jmat.2022.01.004.
- (16) Ensafi, A. A.; Fazel, R.; Rezaei, B.; Hu, J. S. Electrochemical properties of modified poly(4-aminothiophenol)-Zn-Ni MOF-reduced graphene oxide nanocomposite for high-performance supercapacitors. *Fuel* **2022**, *324*, Article. DOI: 10.1016/j.fuel.2022.124724.
- (17) Ensafi, A. A.; Mandian-Talkhoonche, B.; Heydari-Soureshjani, E.; Rezaei, B. Graphene-like sheets supported Fe-Co layered double hydroxides nanoflakes as an efficient electrocatalyst for both hydrogen and oxygen evolution reaction, A green investigation. *Chemosphere* **2022**, *299*, Article. DOI: 10.1016/j.chemosphere.2022.134251.
- (18) Farshadnia, M. A.; Ensafi, A. A.; Mousaabadi, K. Z.; Rezaei, B. Design and synthesis of three-dimensional CoNi₂S₄@MoS₂@rGO nanocomposites and its application in electrochemical supercapacitors. *Journal of Alloys and Compounds* **2022**, *906*, Article. DOI: 10.1016/j.jallcom.2022.164278.
- (19) Fernanders, M. S.; Gough, R. V.; Chevrier, V. F.; Schiffman, Z. R.; Ushijima, S. B.; Martinez, G. M.; Rivera-Valentin, E. G.; Archer, P. D.; Clark, J. V.; Sutter, B.; et al. Water uptake by chlorate salts under Mars-relevant conditions. *Icarus* **2022**, *371*, Article. DOI: 10.1016/j.icarus.2021.114715.

- (20) Gale, C. D.; Derakhshani-Molayousefi, M.; Levinger, N. E. How to Characterize Amorphous Shapes: The Tale of a Reverse Micelle. *Journal of Physical Chemistry B* **2022**, *126* (4), 953-963, Article. DOI: 10.1021/acs.jpcb.1c09439.
- (21) George, A. J.; Dong, B.; Lail, H.; Gomez, M.; Hoffiz, Y. C.; Ware, C. B.; Fang, N.; Murphy, A. Z.; Hrabovszky, E.; Wanders, D.; et al. The E3 ubiquitin ligase RNF216/TRIAD3 is a key coordinator of the hypothalamic-pituitary-gonadal axis. *iScience* **2022**, *25* (6), Article. DOI: 10.1016/j.isci.2022.104386.
- (22) Heydari-Bafrooei, E.; Ensafi, A. A.; Afshari, M.; Dinari, M.; Ghafarinia, V. Mediator-Free Self-Powered Bioassay for Wide-Range Detection of Dissolved Carbon Dioxide. *Analytical Chemistry* **2022**, *9* (46), 16033-16041, Article. DOI: 10.1021/acs.analchem.2c03021.
- (23) Huang, T. X.; Yang, M.; Giang, H.; Dong, B.; Fang, N. Resolving the Heterogeneous Adsorption of Antibody Fragment on a 2D Layered Molybdenum Disulfide by Super-Resolution Imaging. *Langmuir* **2022**, *38* (24), 7455-7461, Article. DOI: 10.1021/acs.langmuir.2c00420.
- (24) Immadisetty, K.; Polasa, A.; Shelton, R.; Moradi, M. Elucidating the molecular basis of spontaneous activation in an engineered mechanosensitive channel. *Computational and Structural Biotechnology Journal* **2022**, *20*, 2539-2550, Article. DOI: 10.1016/j.csbj.2022.05.022.
- (25) Kandhola, G.; Djoleu, A.; Rajan, K.; Batta-Mpouma, J.; Labbe, N.; Sakon, J.; Babst, B. A.; Ghosh, A.; Carrier, D. J.; Kim, J.-W. Impact of species-based wood feedstock variability on physicochemical properties of cellulose nanocrystals. *Cellulose* **2022**, *29* (15), 8213-8228, Article. DOI: 10.1007/s10570-022-04762-9.
- (26) Karaballi, R. A.; Monfared, Y. E.; Bicket, I. C.; Coridan, R. H.; Dasog, M. Solid-state synthesis of UV-plasmonic Cr₂N nanoparticles. *Journal of Chemical Physics* **2022**, *157* (15), Article. DOI: 10.1063/5.0109806.
- (27) Kim, J. W.; Batta-Mpouma, J.; Kandhola, G.; Sakon, J. Covalent Crosslinking of Colloidal Cellulose Nanocrystals for Multifunctional Nanostructured Hydrogels with Tunable Physicochemical Properties. *Biomacromolecules* **2022**, *23* (10), 4085-4096, Article. DOI: 10.1021/acs.biomac.2c00417.
- (28) Kumar, V. G.; Ogden, D. S.; Isu, U. H.; Polasa, A.; Losey, J.; Moradi, M. Prefusion spike protein conformational changes are slower in SARS-CoV-2 than in SARS-CoV-1. *Journal of Biological Chemistry* **2022**, *298* (4), Article. DOI: 10.1016/j.jbc.2022.101814.
- (29) Levey, K. J.; Edwards, M. A.; White, H. S.; Macpherson, J. V. Finite Element Modeling of the Combined Faradaic and Electrostatic Contributions to the Voltammetric Response of Monolayer Redox Films. *Analytical Chemistry* **2022**, *94* (37), 12673-12682, Article. DOI: 10.1021/acs.analchem.2c01976.
- (30) Lu, C.; Chen, J. H.; Pietak, K.; Rokicinska, A.; Kustrowski, P.; Dronkowski, R.; Yuan, J. Y.; Budnyk, S.; Zlotnik, S.; Coridan, R. H.; et al. Semi Transparent Three-Dimensional Macroporous Quaternary Oxynitride Photoanodes for Photoelectrochemical Water Oxidation. *Chemistry of Materials* **2022**, *34* (15), 6902-6911, Article. DOI: 10.1021/acs.chemmater.2c01290.
- (31) Mohale, M.; Gundampati, R. K.; Kumar, T. K. S.; Heyes, C. D. Site-specific labeling and functional efficiencies of human fibroblast growth Factor-1 with a range of fluorescent Dyes in the flexible N-Terminal region and a rigid beta-turn region. *Analytical Biochemistry* **2022**, *640*, Article. DOI: 10.1016/j.ab.2021.114524.

- (32) Mousaabadi, K. Z.; Ensafi, A. A.; Rezaei, B. Co₃O₄/MoCo/Layered Double Hydroxide Nanosheets for Asymmetric Supercapacitor. *ACS Applied Nano Materials* **2022**, 5 (6), 8097-8104, Article. DOI: 10.1021/acsanm.2c01236.
- (33) Mousaabadi, K. Z.; Ensafi, A. A.; Rezaei, B. Simultaneous determination of some opioid drugs using Cu-hemin MOF@MWCNTs as an electrochemical sensor. *Chemosphere* **2022**, 303, Article. DOI: 10.1016/j.chemosphere.2022.135149.
- (34) Niknazar, S.; Ensafi, A. A.; Heydari-Soureshjani, E.; Rezaei, B. Green application of trimetallic nickel-cobalt-molybdenum nanocomposites on 3D graphene oxide as a powerful electrocatalyst for hydrogen evolution reaction. *Chemosphere* **2022**, 294, Article. DOI: 10.1016/j.chemosphere.2022.133670.
- (35) Okyere, D.; Manso, R. H.; Tong, X.; Chen, J. Y. Stability of Polyethylene Glycol-Coated Copper Nanoparticles and Their Optical Properties. *Coatings* **2022**, 12 (6), Article. DOI: 10.3390/coatings12060776.
- (36) Pandey, K.; Sayler, L.; Basnet, R.; Sakon, J.; Wang, F.; Hu, J. Crystal Growth and Electronic Properties of LaSbSe. *Crystals* **2022**, 12 (11), Article. DOI: 10.3390/crust12111663.
- (37) Polasa, A.; Hettige, J.; Immadisetty, K.; Moradi, M. An investigation of the YidC-mediated membrane insertion of Pf3 coat protein using molecular dynamics simulations. *Frontiers in Molecular Biosciences* **2022**, 9, Article. DOI: 10.3389/fmolb.2022.954262.
- (38) Polasa, A.; Mosleh, I.; Losey, J.; Abbaspourrad, A.; Beitle, R.; Moradi, M. Developing a rational approach to designing recombinant proteins for peptide-directed nanoparticle synthesis. *Nanoscale Advances* **2022**, 4 (15), 3161-3171, Article. DOI: 10.1039/d2na00212d.
- (39) Qing, G.; Thompson, D.; Benamara, M.; Heske, C.; Greenlee, L.; Chen, J. Ambient-pressure ozone treatment enables tuning of oxygen vacancy concentration in the La_{1-x}Sr_xFeO_{3-delta} (0 <= x <= 1) perovskite oxides. *Materials Advances* **2022**, 3 (22), 8229-8240, Article. DOI: 10.1039/d2ma00604a.
- (40) Rezaee, T.; Fazel-Zarandi, R.; Karimi, A.; Ensafi, A. A. Metal-organic frameworks for pharmaceutical and biomedical applications. *Journal of Pharmaceutical and Biomedical Analysis* **2022**, 221, Article. DOI: 10.1016/j.jpba.2022.115026.
- (41) Salehan, P.; Ensafi, A. A.; Mousaabadi, K. Z.; Ghasemi, J. B.; Aghaee, E.; Rezaei, B. A theoretical and experimental study of polyaniline/GCE and DNA G-quadruplex conformation as an impedimetric biosensor for the determination of potassium ions. *Chemosphere* **2022**, 292, Article. DOI: 10.1016/j.chemosphere.2021.133460.
- (42) Schichtl, Z. G.; Conlin, S. K.; Mehrabi, H.; Nielander, A. C.; Coridan, R. H. Characterizing Sustained Solar-to-Hydrogen Electrocatalysis at Low Cell Potentials Enabled by Crude Glycerol Oxidation. *ACS Applied Energy Materials* **2022**, 5 (3), 3863-3875, Article. DOI: 10.1021/acsaem.2c00377.
- (43) Sharma, B.; Striegler, S. Polarity and Critical Micelle Concentration of Surfactants Support the Catalytic Efficiency of Nanogels during Glycoside Hydrolyses. *ACS Catalysis* **2022**, 12 (15), 8841-8847, Article. DOI: 10.1021/acscatal.2c01432.

- (44) Sikes, J. C.; Niyonshuti, I. I.; Kanokkanchana, K.; Chen, J. Y.; Tschulik, K.; Fritsch, I. Single Particle Electrochemical Oxidation of Polyvinylpyrrolidone-Capped Silver Nanospheres, Nanocubes, and Nanoplates in Potassium Nitrate and Potassium Hydroxide Solutions. *Journal of the Electrochemical Society* **2022**, *169* (5), Article. DOI: 10.1149/1945-7111/ac63f3.
- (45) Sikes, J. C.; Wonner, K.; Nicholson, A.; Cignoni, P.; Fritsch, I.; Tschulik, K. Characterization of Nanoparticles in Diverse Mixtures Using Localized Surface Plasmon Resonance and Nanoparticle Tracking by Dark-Field Microscopy with Redox Magnetohydrodynamics Microfluidics. *ACS Physical Chemistry Au* **2022**, *2* (4), 289-298, Article. DOI: 10.1021/acsphyschemau.1c00046.
- (46) Striegler, S.; Orizu, I. Solvent-controlled synthesis of bulky and polar-bulky galactonoamidines. *Carbohydrate Research* **2022**, *513*, Article. DOI: 10.1016/j.carres.2022.108520.
- (47) Wolinski, K.; Pulay, P. Compact representation of generalized molecular polarizabilities and efficient calculation of polarization energy in an arbitrary electric field. *International Journal of Quantum Chemistry* **2022**, *122* (8), Article. DOI: 10.1002/qua.26792.
- (48) Zheng, D.; Yuan, Y.; Wang, F. Fragmentation Method for Computing Quantum Mechanics and Molecular Mechanics Gradients for Force Matching: Validation with Hydration Free Energy Predictions Using Adaptive Force Matching. *Journal of Physical Chemistry A* **2022**, *126* (16), 2609-2617, Article. DOI: 10.1021/acs.jpca.2c01615.

2021 (n=47)

- (1) Acharya, M.; Liyanage, R.; Gupta, A.; Arsi, K.; Donoghue, A. M.; Lay, J. O., Jr.; Rath, N. C. Thymosin beta 4 dynamics during chicken enteroid development. *Molecular and Cellular Biochemistry* **2021**, *476* (2), 1303-1312, Article. DOI: 10.1007/s11010-020-04008-x.
- (2) Afrose, F.; Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Examination of pH dependency and orientation differences of membrane spanning alpha helices carrying a single or pair of buried histidine residues. *Biochimica et Biophysica Acta-Biomembranes* **2021**, *1863* (1), Article. DOI: 10.1016/j.bbamem.2020.183501.
- (3) Agrawal, S.; Kumar, V. G.; Gundampati, R. K.; Moradi, M.; Kumar, T. K. S. Characterization of the structural forces governing the reversibility of the thermal unfolding of the human acidic fibroblast growth factor. *Scientific Reports* **2021**, *11* (1), Article. DOI: 10.1038/s41598-021-95050-2.
- (4) Ahrens, C. J.; Chevrier, V. F. Investigation of the morphology and interpretation of Hekla Cavus, Pluto. *Icarus* **2021**, *356*, Article. DOI: 10.1016/j.icarus.2020.114108.
- (5) Almansaf, Z.; Hu, J. Y.; Zanca, F.; Shahsavari, H. R.; Kampmeyer, B.; Tsuji, M.; Maity, K.; Lomonte, V.; Ha, Y. M.; Mastorilli, P.; et al. Pt(II)-Decorated Covalent Organic Framework for Photocatalytic Difluoroalkylation and Oxidative Cyclization Reactions. *ACS Applied Materials & Interfaces* **2021**, *13* (5), 6349-6358, Article. DOI: 10.1021/acsami.0c21370.

- (6) Baucom, D. R.; Furr, M.; Kumar, V. G.; Okoto, P.; Losey, J. L.; Henry, R. L.; Moradi, M.; Kumar, T. K. S.; Heyes, C. D. Transient local secondary structure in the intrinsically disordered C-term of the Albino3 insertase. *Biophysical Journal* **2021**, *120* (22), 4992-5004, Article. DOI: 10.1016/j.bpj.2021.10.013.
- (7) Chen, H.; Wilson, J.; Ercanbrack, C.; Smith, H.; Gan, Q.; Fan, C. Genome-Wide Screening of Oxidizing Agent Resistance Genes in Escherichia coli. *Antioxidants* **2021**, *10* (6), Article. DOI: 10.3390/antiox10060861.
- (8) Chevrier, V. F.; Morisson, M. Carbonate-Phyllosilicate Parageneses and Environments of Aqueous Alteration in Nili Fossae and Mars. *Journal of Geophysical Research-Planets* **2021**, *126* (4), Article. DOI: 10.1029/2020je006698.
- (9) Clem, C. M.; Sharma, B.; Striegler, S. Structure-Activity-Relationship Studies to Elucidate Sources of Antibacterial Activity of Modular Polyacrylate Microgels. *ACS Applied Bio Materials* **2021**, *4* (10), 7578-7586, Article. DOI: 10.1021/acsabm.1c00831.
- (10) Deshwal, A.; Phan, P.; Datta, J.; Kannan, R.; Thallapuram, S. K. A Meta-Analysis of the Protein Components in Rattlesnake Venom. *Toxins* **2021**, *13* (6), Article. DOI: 10.3390/toxins13060372.
- (11) Emran, A.; Marzen, L. J.; King, D. T.; Chevrier, V. F. Thermophysical and Compositional Analyses of Dunes at Hargraves Crater, Mars. *Planetary Science Journal* **2021**, *2* (6), Article. DOI: 10.3847/psj/ac25ee.
- (12) Feng, Q.; Wei, D.; Su, Y.; Zhou, Z.; Wang, F.; Tian, C. Study of Thermal Expansion Coefficient of Graphene via Raman Micro-Spectroscopy: Revisited. *Small* **2021**, *17* (12), Article. DOI: 10.1002/smll.202006146.
- (13) Hu, J. T.; Wang, Q. C.; Wu, B. B.; Tan, S.; Shadike, Z.; Bi, Y. J.; Whittingham, M. S.; Xiao, J.; Yang, X. Q.; Hu, E. Y. Fundamental Linkage Between Structure, Electrochemical Properties, and Chemical Compositions of LiNi_{1-x}yMnxCoyO₂ Cathode Materials. *ACS Applied Materials & Interfaces* **2021**, *13* (2), 2622-2629, Article. DOI: 10.1021/acsami.0c18942.
- (14) Hu, J. Y.; Zanca, F.; McManus, G. J.; Riha, I. A.; Nguyen, H. G. T.; Shirley, W.; Borcik, C. G.; Wylie, B. J.; Benamara, M.; van Zee, R. D.; et al. Catalyst-Enabled In Situ Linkage Reduction in Imine Covalent Organic Frameworks. *ACS Applied Materials & Interfaces* **2021**, *13* (18), 21740-21747, Article. DOI: 10.1021/acsami.1c02709.
- (15) Hu, J.; Mehrabi, H.; Meng, Y.-S.; Taylor, M.; Zhan, J.-H.; Yan, Q.; Benamara, M.; Coridan, R. H.; Beyzavi, H. Probe metal binding mode of imine covalent organic frameworks: cycloiridation for (photo)catalytic hydrogen evolution from formate. *Chemical Science* **2021**, *12* (22), 7930-7936, Article. DOI: 10.1039/d1sc01692j.
- (16) Immadisetty, K.; Moradi, M. Mechanistic Picture for Chemomechanical Coupling in a Bacterial Proton-Coupled Oligopeptide Transporter from *Streptococcus Thermophilus*. *Journal of Physical Chemistry B* **2021**, *125* (34), 9738-9750, Article. DOI: 10.1021/acs.jpcb.1c03982.
- (17) Islam, H. M.; Mehrabi, H.; Coridan, R. H.; Burheim, O. S.; Hihn, J.-Y.; Pollet, B. G. The effects of power ultrasound (24 kHz) on the electrochemical reduction of CO₂ on polycrystalline copper electrodes. *Ultrasonics Sonochemistry* **2021**, *72*, Article. DOI: 10.1016/j.ultsonch.2020.105401.

- (18) Jung, S.; Harris, N.; Niyonshuti, I. I.; Jenkins, S. V.; Hayar, A. M.; Watanabe, F.; Jamshidi-Parsian, A.; Chen, J.; Borrelli, M. J.; Griffin, R. J. Photothermal Response Induced by Nanocage-Coated Artificial Extracellular Matrix Promotes Neural Stem Cell Differentiation. *Nanomaterials* **2021**, *11* (5), Article. DOI: 10.3390/nano11051216.
- (19) Khan, F. Z.; Tello, M. A.; Parette, D. N.; Fritsch, I. Sustaining redox-magnetohydrodynamics (R-MHD) microfluidics by switching oppositely-polarized permanent magnets: Synchronized activation and automation. *Sensors and Actuators B-Chemical* **2021**, *346*, Article. DOI: 10.1016/j.snb.2021.130415.
- (20) Krishnamurthi, V. R.; Niyonshuti, I. I.; Chen, J.; Wang, Y. A new analysis method for evaluating bacterial growth with microplate readers. *PLoS One* **2021**, *16* (1), Article. DOI: 10.1371/journal.pone.0245205.
- (21) Kumar, V. G.; Agrawal, S.; Kumar, T. K. S.; Moradi, M. Mechanistic Picture for Monomeric Human Fibroblast Growth Factor 1 Stabilization by Heparin Binding. *Journal of Physical Chemistry B* **2021**, *125* (46), 12690-12697, Article. DOI: 10.1021/acs.jpcb.1c07772.
- (22) Liyanage, R.; Gidden, J.; Wilkins, C. L.; Lay, J. O. Matrix-assisted ionization Fourier transform mass spectrometry for the analysis of lipids. *Rapid Communications in Mass Spectrometry* **2021**, *35* (S1), Article. DOI: 10.1002/rcm.8349.
- (23) Ma, Z. L.; Lu, C.; Chen, J. H.; Rokicinska, A.; Kustrowski, P.; Coridan, R.; Dronkowski, R.; Slabon, A.; Jaworski, A. CeTiO₂N oxynitride perovskite: paramagnetic N-14 MAS NMR without paramagnetic shifts. *Zeitschrift für Naturforschung B-a Journal of Chemical Sciences* **2021**, *76* (5), 275-280, Article. DOI: 10.1515/znb-2021-0031.
- (24) Maddala, S.; Savin, M. C.; Stenken, J. A.; Wood, L. S. Nitrogen Dynamics: Quantifying and Differentiating Fluxes in a Riparian Wetland Soil. *ACS Earth and Space Chemistry* **2021**, *5* (5), 1254-1264, Article. DOI: 10.1021/acsearthspacechem.0c00301.
- (25) Marchoubeh, M. L.; Cobb, S. J.; Tello, M. A.; Hu, M. J.; Jaquins-Gerstl, A.; Robbins, E. M.; Macpherson, J. V.; Michael, A. C.; Fritsch, I. Miniaturized probe on polymer SU-8 with array of individually addressable microelectrodes for electrochemical analysis in neural and other biological tissues. *Analytical and Bioanalytical Chemistry* **2021**, *413* (27), 6777-6791, Article. DOI: 10.1007/s00216-021-03327-2.
- (26) Martin, W.; Tian, Y.; Xiao, J. Understanding Diffusion and Electrochemical Reduction of Li⁺ Ions in Liquid Lithium Metal Batteries. *Journal of the Electrochemical Society* **2021**, *168* (6), Article. DOI: 10.1149/1945-7111/ac0647.
- (27) McKay, M. J.; Marr, K. A.; Price, J. R.; Greathouse, D. V.; Koeppel, R. E. Lipid-Dependent Titration of Glutamic Acid at a Bilayer Membrane Interface. *ACS Omega* **2021**, *6* (12), 8488-8494, Article. DOI: 10.1021/acsomega.1c00276.
- (28) Mehrabi, H.; Eddy, C. G.; Hollis, T. I.; Vance, J. N.; Coridan, R. H. Controlled exposure of CuO thin films through corrosion-protecting, ALD-deposited TiO₂ overlayers. *Zeitschrift für Naturforschung B-a Journal of Chemical Sciences* **2021**, *76* (10-12), 719-726, Article. DOI: 10.1515/znb-2021-0117.

- (29) Ngo, Q. P.; He, M.; Concellon, A.; Yoshinaga, K.; Luo, S.-X. L.; Aljabri, N.; Swager, T. M. Reconfigurable Pickering Emulsions with Functionalized Carbon Nanotubes. *Langmuir* **2021**, *37* (27), 8204-8211, Article. DOI: 10.1021/acs.langmuir.1c00904.
- (30) Ojha, L.; Karimi, S.; Buffo, J.; Nerozzi, S.; Holt, J. W.; Smrekar, S.; Chevrier, V. Martian Mantle Heat Flow Estimate From the Lack of Lithospheric Flexure in the South Pole of Mars: Implications for Planetary Evolution and Basal Melting. *Geophysical Research Letters* **2021**, *48* (2), Article. DOI: 10.1029/2020gl091409.
- (31) Pal, S.; Koeppe, R. E.; Chattopadhyay, A. Membrane electrostatics sensed by tryptophan anchors in hydrophobic model peptides depends on non-aromatic interfacial amino acids: implications in hydrophobic mismatch. *Faraday Discussions* **2021**, *232* (0), 330-346, Article. DOI: 10.1039/d0fd00065e.
- (32) Price, J. R.; Afrose, F.; Greathouse, D. V.; Koeppe, R. E. Illuminating Disorder Induced by Glu in a Stable Arg-Anchored Transmembrane Helix. *ACS Omega* **2021**, *6* (31), 20611-20618, Article. DOI: 10.1021/acsomega.1c02800.
- (33) Rogers, A.; Niyonshuti, I. I.; Cai, A.; Wang, F.; Benamara, M.; Chen, J.; Wang, Y. Real-Time Imaging of Laser-Induced Nanowelding of Silver Nanoparticles in Solution. *Journal of Physical Chemistry C* **2021**, *125* (19), 10422-10430, Article. DOI: 10.1021/acs.jpcc.1c00184.
- (34) Sakamaki, Y.; Ozdemir, J.; Heidrick, Z.; Azzun, A.; Watson, O.; Tsuji, M.; Salmon, C.; Sinha, A.; Batta-Mpouma, J.; McConnell, Z.; et al. A Bioconjugated Chlorin-Based Metal-Organic Framework for Targeted Photodynamic Therapy of Triple Negative Breast and Pancreatic Cancers. *ACS Applied Bio Materials* **2021**, *4* (2), 1432-1440, Article. DOI: 10.1021/acsabm.0c01324.
- (35) Sakhel, B.; Jayanthi, S.; Muhoza, D.; Okoto, P.; Kumar, T. K. S.; Adams, P. Simplification of the purification of heat stable recombinant low molecular weight proteins and peptides from GST-fusion products. *Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences* **2021**, *1172*, Article. DOI: 10.1016/j.jchromb.2021.122627.
- (36) Salandari-Jolge, N.; Ensafi, A. A.; Rezaei, B. An ultrasensitive electrochemical aptasensor based on a single-stranded aptamer-Au@Fe-MIL-88 complex using methylene blue as an electrochemical probe for insulin detection. *Analytical and Bioanalytical Chemistry* **2021**, *413* (30), 7451-7462, Article. DOI: 10.1007/s00216-021-03703-y.
- (37) Sears, D.; Ostrowski, D.; Smith, H.; Sissay, A.; Trivedi, M. A new method for determining the petrologic type of unequilibrated ordinary chondrites that can be applied to asteroids. *Icarus* **2021**, *363*, Article. DOI: 10.1016/j.icarus.2021.114442.
- (38) Shahsavari, H. R.; Chamani, S.; Hu, J. Y.; Aghakhanpour, R. B.; Rheingold, A. L.; Paziresh, S.; Rahal, D.; Tsuji, M.; Momand, B.; Beyzavi, H. The Utilization of Para-Substituted Triphenylphosphine Derivatives to Synthesize Highly Emissive Cyclometalated Platinum(II) Complexes. *European Journal of Inorganic Chemistry* **2021**, *2021* (46), 4821-4831, Article. DOI: 10.1002/ejic.202100732.
- (39) Shahsavari, H. R.; Hu, J. Y.; Chamani, S.; Sakamaki, Y.; Aghakhanpour, R. B.; Salmon, C.; Fereidoonnezhad, M.; Mojaddami, A.; Peyvasteh, P.; Beyzavi, H. Fluorinated Cycloplatinated(II) Complexes Bearing Bisphosphine

Ligands as Potent Anticancer Agents. *Organometallics* **2021**, *40* (1), 72-82, Article. DOI: 10.1021/acs.organomet.0c00728.

(40) Soltani-Kordshuli, F.; Okyere, D.; Chen, J.; Miller, C.; Harris, N.; Afshar-Mohajer, M.; Ghosh, S. K.; Zou, M. Tribological behavior of the PDA/PTFE + Cu-SiO₂ nanoparticle thin coatings. *Surface & Coatings Technology* **2021**, *409*, Article. DOI: 10.1016/j.surfcoat.2021.126852.

(41) Turk, A. Z.; Marchoubeh, M. L.; Fritsch, I.; Maguire, G. A.; SheikhBahaei, S. Dopamine, vocalization, and astrocytes. *Brain and Language* **2021**, *219*, Article. DOI: 10.1016/j.bandl.2021.104970.

(42) Wang, Q.; Wang, Q.; Zhang, Y.; Mohamed, Y. M.; Pacheco, C.; Zheng, N.; Zare, R. N.; Chen, H. Electrocatalytic redox neutral 3+2 annulation of N-cyclopropylanilines and alkenes. *Chemical Science* **2021**, *12* (3), 969-975, Article. DOI: 10.1039/d0sc05665k.

(43) Xi, X.; Niyonshuti, I. I.; Yu, N.; Yao, L.; Fu, Y.; Chen, J.; Li, Y. Label-Free Quartz Crystal Microbalance Biosensor Based on Aptamer-Capped Gold Nanocages Loaded with Polyamidoamine for Thrombin Detection. *ACS Applied Nano Materials* **2021**, *4* (10), 10047-10054, Article. DOI: 10.1021/acsanm.1c01350.

(44) Yuan, Y.; Ma, Z.; Wang, F. Development and Validation of a DFT-Based Force Field for a Hydrated Homoalanine Polypeptide. *Journal of Physical Chemistry B* **2021**, *125* (6), 1568-1581, Article. DOI: 10.1021/acs.jpcb.0c11618.

(45) Yuan, Y.; Wang, F. A comparison of three DFT exchange-correlation functionals and two basis sets for the prediction of the conformation distribution of hydrated polyglycine. *Journal of Chemical Physics* **2021**, *155* (9), Article. DOI: 10.1063/5.0059669.

(46) Zheng, D.; Wang, F. Performing Molecular Dynamics Simulations and Computing Hydration Free Energies on the B3LYP-D3(BJ) Potential Energy Surface with Adaptive Force Matching: A Benchmark Study with Seven Alcohols and One Amine. *ACS Physical Chemistry Au* **2021**, *1* (1), 14-24, Article. DOI: 10.1021/acsphyschemau.1c00006.

(47) Zheng, D.; Yuan, Y.; Wang, F. Determining the hydration free energies of selected small molecules with MP2 and local MP2 through adaptive force matching. *Journal of Chemical Physics* **2021**, *154* (10), Article. DOI: 10.1063/5.0044712.

2020 (n=56)

(1) Afrose, F.; Koeppe, R. E. Comparing Interfacial Trp, Interfacial His and pH Dependence for the Anchoring of Tilted Transmembrane Helical Peptides. *Biomolecules* **2020**, *10* (2), Article. DOI: 10.3390/biom10020273.

(2) Al-Ogaili, A. S.; Liyanage, R.; Lay, J. O., Jr.; Jiang, T.; Vuong, C. N.; Agrawal, S.; Kumar, T. K. S.; Berghman, L. R.; Hargis, B. M.; Kwon, Y. M. DNA aptamer-based rolling circle amplification product as a novel immunological adjuvant. *Scientific Reports* **2020**, *10* (1), Article. DOI: 10.1038/s41598-020-79420-w.

- (3) Alves, M. R.; Sauer, J. S.; Prather, K. A.; Grassian, V. H.; Wilkins, C. L. Liquid Sampling-Atmospheric Pressure Glow Discharge Ionization as a Technique for the Characterization of Salt-Containing Organic Samples. *Analytical Chemistry* **2020**, 92 (13), 8845-8851, Article. DOI: 10.1021/acs.analchem.0c00361.
- (4) Baguet, T.; Verhoeven, J.; Pauwelyn, G.; Hu, J. Y.; Lambe, P.; De Lombaerde, S.; Piron, S.; Donche, S.; Descamps, B.; Goethals, I.; et al. Radiosynthesis, in vitro and preliminary in vivo evaluation of the novel glutamine derived PET tracers [F-18]fluorophenylglutamine and [F-18] fluorobiphenylglutamine. *Nuclear Medicine and Biology* **2020**, 86-87, 20-29, Article. DOI: 10.1016/j.nucmedbio.2020.03.006.
- (5) Balayeva, N. O.; Mamiyev, Z.; Dillert, R.; Zheng, N.; Bahnemann, D. W. Rh/TiO₂-Photocatalyzed Acceptorless Dehydrogenation of N-Heterocycles upon Visible-Light Illumination. *ACS Catalysis* **2020**, 10 (10), 5542-5553, Article. DOI: 10.1021/acscatal.0c00556.
- (6) Burgin, S. R.; Sakamaki, Y.; Tsuji, M.; Watson, O.; Heidrick, Z.; Chitwood, T.; Benamara, M.; Martin, E. M.; Childress, M.; Beyzavi, M. H. Using a Faculty-Developed Documentary-Style Film to Communicate Authentic Chemistry Research to a High School Audience. *Journal of Chemical Education* **2020**, 97 (8), 2351-2355, Article. DOI: 10.1021/acs.jchemed.0c00376.
- (7) Celen, S.; Rokka, J.; Gilbert, T. M.; Koole, M.; Vermeulen, I.; Serdons, K.; Schroeder, F. A.; Wagner, F. F.; Bleeser, T.; Hightower, B. G.; et al. Translation of HDAC6 PET Imaging Using [F-18]EKZ-001-cGMP Production and Measurement of HDAC6 Target Occupancy in Nonhuman Primates. *ACS Chemical Neuroscience* **2020**, 11 (7), 1093-1101, Article. DOI: 10.1021/acschemneuro.0c00074.
- (8) Chen, H.; Ercanbrack, C.; Wang, T.; Gan, Q.; Fan, C. A Synthetic Reporter for Probing Mistranslation in Living Cells. *Frontiers in Bioengineering and Biotechnology* **2020**, 8, Article. DOI: 10.3389/fbioe.2020.00623.
- (9) Chevrier, V. F.; Roy, R.; Meslin, P. Y.; Le Mouelic, S.; Mathe, P. E.; Rochette, P.; Bonello, G. Geochemical and spectral characterization of an altered Antarctic dolerite: Implications for recent weathering on Mars. *Planetary and Space Science* **2020**, 194, Article. DOI: 10.1016/j.pss.2020.105106.
- (10) Chevrier, V. F.; Rivera-Valentín, E. G.; Soto, A.; Altheide, T. S. Global Temporal and Geographic Stability of Brines on Present-day Mars. *Planetary Science Journal* **2020**, 1 (3), Article. DOI: 10.3847/psj/abbc14.
- (11) Choudhury, D.; Niyonshuti, I. I.; Chen, J.; Goss, J. A.; Zou, M. Tribological performance of polydopamine plus Ag nanoparticles/PTFE thin films. *Tribology International* **2020**, 144, Article. DOI: 10.1016/j.triboint.2019.106097.
- (12) Coridan, R. H. A neural network-based approach to predicting absorption in nanostructured, disordered photoelectrodes. *Chemical Communications* **2020**, 56 (72), 10473-10476, Article. DOI: 10.1039/d0cc04229c.
- (13) Crane, C. C.; Manso, R. H.; Li, J.; Benamara, M.; Tao, J.; Zhu, Y.; Wang, F.; Chen, J. A Metal-on-Metal Growth Approach to Metal-Metal Oxide Core- Shell Nanostructures with Plasmonic Properties. *Journal of Physical Chemistry C* **2020**, 124 (31), 17191-17203, Article. DOI: 10.1021/acs.jpcc.0c03226.
- (14) Czaplinski, E.; Yu, X. T.; Dzurilla, K.; Chevrier, V. Experimental Investigation of the Acetylene-Benzene Cocrystal on Titan. *Planetary Science Journal* **2020**, 1 (3), Article. DOI: 10.3847/psj/abbf57.

- (15) Duverna, E.; Adams, P. D. Novel Strategies to Tackle Ras-Related Cancer: An Opinion Based on Two Recent Reviews. *American Journal of Biomedical Science and Research* **2020**, 9 (2), 162-164, Article. DOI: 10.34297/ajbsr.2020.09.001376.
- (16) Edwards, J. S.; Hettiarachchy, N. S.; Kumar, T. K. S.; Carbonero, F.; Martin, E. M.; Benamara, M. Physicochemical properties of soy protein hydrolysate and its formulation and stability with encapsulated probiotic under in vitro gastrointestinal environment. *Journal of Food Science* **2020**, 85 (10), 3543-3551, Article. DOI: 10.1111/1750-3841.15399.
- (17) Hu, J. T.; Wu, B. B.; Cao, X.; Bi, Y. J.; Chae, S. J.; Niu, C. J.; Xiao, B. W.; Tao, J. H.; Zhang, J. G.; Xiao, J. Evolution of the rate-limiting step: From thin film to thick Ni-rich cathodes. *Journal of Power Sources* **2020**, 454, Article. DOI: 10.1016/j.jpowsour.2020.227966.
- (18) Hu, J. Y.; Zanca, F.; Lambe, P.; Tsuji, M.; Wijeweera, S.; Todisco, S.; Mastrorilli, P.; Shirley, W.; Benamara, M.; Moghadam, P. Z.; et al. (Thio)urea-Based Covalent Organic Framework as a Hydrogen-Bond-Donating Catalyst. *ACS Applied Materials & Interfaces* **2020**, 12 (26), 29212-29217, Article. DOI: 10.1021/acsami.0c04957.
- (19) Hu, J.; Nikravesh, M.; Shahsavari, H. R.; Babadi Aghakhanpour, R.; Rheingold, A. L.; Alshami, M.; Sakamaki, Y.; Beyzavi, H. A C^N Cycloplatinated(II) Fluoride Complex: Photophysical Studies and C-sp(3)-F Bond Formation. *Inorganic Chemistry* **2020**, 59 (22), 16319-16327, Article. DOI: 10.1021/acs.inorgchem.0c02115.
- (20) Jones, B. J.; Korzeniewski, C.; Franco, J. H.; Minteer, S. D.; Fritsch, I. Spatially Directed Functionalization by Co-electropolymerization of Two 3,4-ethylenedioxothiophene Derivatives on Microelectrodes within an Array. *Journal of the Electrochemical Society* **2020**, 167 (16), Article. DOI: 10.1149/1945-7111/abcb75.
- (21) Kandhola, G.; Djoleu, A.; Rajan, K.; Labbe, N.; Sakon, J.; Carrier, D. J.; Kim, J. W. Maximizing production of cellulose nanocrystals and nanofibers from pre-extracted loblolly pine kraft pulp: a response surface approach. *Bioresources and Bioprocessing* **2020**, 7 (1), Article. DOI: 10.1186/s40643-020-00302-0.
- (22) Kempler, P. A.; Coridan, R. H.; Lewis, N. S. Effects of bubbles on the electrochemical behavior of hydrogen-evolving Si microwire arrays oriented against gravity. *Energy & Environmental Science* **2020**, 13 (6), 1808-1817, Article. DOI: 10.1039/d0ee00356e.
- (23) Krishnamurthi, V. R.; Rogers, A.; Peifer, J.; Niyonshuti, I. I.; Chen, J.; Wang, Y. Microampere Electric Current Causes Bacterial Membrane Damage and Two-Way Leakage in a Short Period of Time. *Applied and Environmental Microbiology* **2020**, 86 (16), Article. DOI: 10.1128/aem.01015-20.
- (24) Kumar, P.; Chevrier, V. F. Solubility of Nitrogen in Methane, Ethane, and Mixtures of Methane and Ethane at Titan-Like Conditions: A Molecular Dynamics Study. *ACS Earth and Space Chemistry* **2020**, 4 (2), 241-248, Article. DOI: 10.1021/acsearthspacechem.9b00289.
- (25) Ma, Z. L.; Pietak, K.; Piatek, J.; DeMoulied, J. R.; Rokicinska, A.; Kustrowski, P.; Dronkowski, R.; Zlotnik, S.; Coridan, R. H.; Slabon, A. Semi-transparent quaternary oxynitride photoanodes on GaN underlayers. *Chemical Communications* **2020**, 56 (86), 13193-13196, Article. DOI: 10.1039/d0cc04894a.

- (26) Massoud, A.; Farid, O. M.; Maree, R. M.; Allan, K. F.; Tian, Z. R. An improved metal cation capture on polymer with graphene oxide synthesized by gamma radiation. *Reactive & Functional Polymers* **2020**, *151*, Article. DOI: 10.1016/j.reactfunctpolym.2020.104564.
- (27) McKay, M. J.; Greathouse, D. V.; Koeppe, R. E. Flanking aromatic residue competition influences transmembrane peptide helix dynamics. *FEBS Letters* **2020**, *594* (24), 4280-4291, Article. DOI: 10.1002/1873-3468.13926.
- (28) Moldenhauer, J.; Sella, C.; Moffett, B.; Baker, J.; Thouin, L.; Amatore, C.; Kilyanek, S. M.; Paul, D. W. Optimization of electrochemical time of flight measurements for precise determinations of diffusion coefficients over a wide range in various media. *Electrochimica Acta* **2020**, *345*, Article. DOI: 10.1016/j.electacta.2020.136113.
- (29) Mosleh, I.; Shahsavari, H. R.; Beitle, R.; Beyzavi, M. H. Recombinant Peptide Fusion Protein-Templated Palladium Nanoparticles for Suzuki-Miyaura and Stille Coupling Reactions. *ChemCatChem* **2020**, *12* (11), 2942-2946, Article. DOI: 10.1002/cctc.201902099.
- (30) Nguyen, A. T.; Gao, F.; Baucom, D.; Heyes, C. D. CuInS₂-Doped ZnS Quantum Dots Obtained via Non-Injection Cation Exchange Show Reduced but Heterogeneous Blinking and Provide Insights into Their Structure-Optical Property Relationships. *Journal of Physical Chemistry C* **2020**, *124* (19), 10744-10754, Article. DOI: 10.1021/acs.jpcc.0c01933.
- (31) Niyonshuti, I. I.; Krishnamurthi, V. R.; Okyere, D.; Song, L.; Benamara, M.; Tong, X.; Wang, Y.; Chen, J. Polydopamine Surface Coating Synergizes the Antimicrobial Activity of Silver Nanoparticles. *ACS Applied Materials & Interfaces* **2020**, *12* (36), 40067-40077, Article. DOI: 10.1021/acsami.0c10517.
- (32) Pandey, P.; Hansmann, U. H. E.; Wang, F. Altering the Solubility of the Antibiotic Candidate Nisin-A Computational Study. *ACS Omega* **2020**, *5* (38), 24854-24863, Article. DOI: 10.1021/acsomega.0c03594.
- (33) Phipps, J.; Chen, H.; Donovan, C.; Dominguez, D.; Morgan, S.; Weidman, B.; Fan, C.; Beyzavi, H. Catalytic Activity, Stability, and Loading Trends of Alcohol Dehydrogenase Enzyme Encapsulated in a Metal-Organic Framework. *ACS Applied Materials & Interfaces* **2020**, *12* (23), 26084-26094, Article. DOI: 10.1021/acsami.0c06964.
- (34) Port, S. T.; Chevrier, V. F. Stability of pyrrhotite under experimentally simulated Venus conditions. *Planetary and Space Science* **2020**, *193*, Article. DOI: 10.1016/j.pss.2020.105022.
- (35) Port, S. T.; Chevrier, V. F.; Kohler, E. Investigation into the radar anomaly on Venus: The effect of Venus conditions on bismuth, tellurium, and sulfur mixtures. *Icarus* **2020**, *336*, Article. DOI: 10.1016/j.icarus.2019.113432.
- (36) Powless, A. J.; Prieto, S. P.; Gramling, M. R.; Chen, J.; Muldoon, T. J. A Light-Sheet-Based Imaging Spectrometer to Characterize Acridine Orange Fluorescence within Leukocytes. *Diagnostics* **2020**, *10* (12), Article. DOI: 10.3390/diagnostics10121082.
- (37) Pulay, P.; Werner, H. J. Breaking established paradigms: a tribute to Wilfried Meyer's contributions to ab initio quantum chemistry. *Molecular Physics* **2020**, *118* (21-22), Article. DOI: 10.1080/00268976.2020.1730993.

- (38) Rajan, K.; Djioleu, A.; Kandhola, G.; Labbe, N.; Sakon, J.; Carrier, D. J.; Kim, J.-W. Investigating the effects of hemicellulose pre-extraction on the production and characterization of loblolly pine nanocellulose. *Cellulose* **2020**, 27 (7), 3693-3706, Article. DOI: 10.1007/s10570-020-03018-8.
- (39) Ramezani, M. S.; Ozdemir, J.; Khosropour, A. R.; Beyzavi, M. H. Sulfur-Decorated Hyper-Cross-Linked Coal Tar: A Microporous Organic Polymer for Efficient and Expeditious Mercury Removal. *ACS Applied Materials & Interfaces* **2020**, 12 (39), 44117-44124, Article. DOI: 10.1021/acsami.0c10617.
- (40) Rivera-Valentín, E. G.; Chevrier, V. F.; Soto, A.; Martínez, G. Distribution and habitability of (meta)stable brines on present-day Mars. *Nature Astronomy* **2020**, 4 (8), 756-761, Article. DOI: 10.1038/s41550-020-1080-9.
- (41) Rogers, T. R.; Wang, F. Accurate MP2-based force fields predict hydration free energies for simple alkanes and alcohols in good agreement with experiments. *Journal of Chemical Physics* **2020**, 153 (24), Article. DOI: 10.1063/5.0035032.
- (42) Rogers, T. R.; Wang, F. Comparing Alchemical Free Energy Estimates to Experimental Values Based on the Ben-Naim Formula: How Much Agreement Can We Expect? *Journal of Physical Chemistry B* **2020**, 124 (5), 840-847, Article. DOI: 10.1021/acs.jpcb.9b08965.
- (43) Sadoon, A. A.; Khadka, P.; Freeland, J.; Gundampati, R. K.; Manso, R. H.; Ruiz, M.; Krishnamurthi, V. R.; Thallapuram, S. K.; Chen, J.; Wang, Y. Silver Ions Caused Faster Diffusive Dynamics of Histone-Like Nucleoid-Structuring Proteins in Live Bacteria. *Applied and Environmental Microbiology* **2020**, 86 (6), Article. DOI: 10.1128/aem.02479-19.
- (44) Sakamaki, Y.; Tsuji, M.; Heidrick, Z.; Watson, O.; Durchman, J.; Salmon, C.; Burgin, S. R.; Beyzavi, M. H. Preparation and Applications of Metal-Organic Frameworks (MOFs): A Laboratory Activity and Demonstration for High School and/or Undergraduate Students. *Journal of Chemical Education* **2020**, 97 (4), 1109-1116, Article. DOI: 10.1021/acs.jchemed.9b01166.
- (45) Sakamaki, Y.; Ozdemir, J.; Diaz Perez, A.; Heidrick, Z.; Watson, O.; Tsuji, M.; Salmon, C.; Batta-Mpouma, J.; Azzun, A.; Lomonte, V.; et al. Maltotriose Conjugated Metal-Organic Frameworks for Selective Targeting and Photodynamic Therapy of Triple Negative Breast Cancer Cells and Tumor Associated Macrophages. *Advanced Therapeutics* **2020**, 3 (8), Article. DOI: 10.1002/adtp.202000029.
- (46) Schicht, Z. G.; Mehrab, H.; Coridan, R. H. Electrooxidation of Glycerol on Self-Organized, Mixed Au-Pt Interfaces Formed on Ni Substrates. *Journal of the Electrochemical Society* **2020**, 167 (5), Article. DOI: 10.1149/1945-7111/ab679e.
- (47) Sharma, B.; Clem, C. M.; Diaz Perez, A.; Striegler, S. Antimicrobial Activity of Microgels with an Immobilized Copper(II) Complex Linked to Cross-Linking and Composition. *ACS Applied Bio Materials* **2020**, 3 (11), 7611-7619, Article. DOI: 10.1021/acsabm.0c00820.
- (48) Sharma, B.; Striegler, S. Nonionic Surfactant Blends to Control the Size of Microgels and Their Catalytic Performance during Glycoside Hydrolyses. *ACS Catalysis* **2020**, 10 (16), 9458-9463, Article. DOI: 10.1021/acscatal.0c01887.

- (49) Singh, R.; Liyanage, R.; Gupta, C.; Lay, J. O., Jr; Pereira, A.; Rojas, C. M. The Arabidopsis Proteins AtNHR2A and AtNHR2B Are Multi-Functional Proteins Integrating Plant Immunity With Other Biological Processes. *Frontiers in Plant Science* **2020**, *11*, Article. DOI: 10.3389/fpls.2020.00232.
- (50) Steckloff, J. K.; Soderblom, J. M.; Farnsworth, K. K.; Chevrier, V. F.; Hanley, J.; Soto, A.; Groven, J. J.; Grundy, W. M.; Pearce, L. A.; Tegler, S. C.; et al. Stratification Dynamics of Titan's Lakes via Methane Evaporation. *Planetary Science Journal* **2020**, *1* (2), Article. DOI: 10.3847/psj/ab974e.
- (51) Striegler, S.; Sharma, B.; Orizu, I. Microgel-Catalyzed Hydrolysis of Nonactivated Disaccharides. *ACS Catalysis* **2020**, *10* (24), 14451-14456, Article. DOI: 10.1021/acscatal.0c03401.
- (52) Sustich, S. J.; Afrose, F.; Greathouse, D. V.; Koeppe, R. E. Influence of interfacial tryptophan residues on an arginine-flanked transmembrane helix. *Biochimica et Biophysica Acta-Biomembranes* **2020**, *1862* (2), Article. DOI: 10.1016/j.bbamem.2019.183134.
- (53) Tejada-Vapiro, R.; Mosleh, I.; Mukherjee, R. P.; Aljewari, H.; Fruchtl, M.; Elmasheiti, A.; Bedford, N.; Greenlee, L.; Beyzavi, M. H.; Beitle, R. Recombinant peptide fusion construction for protein-templated catalytic palladium nanoparticles. *Biotechnology Progress* **2020**, *36* (3), Article. DOI: 10.1002/btpr.2956.
- (54) Toth, Z.; Pulay, P. Comparison of Methods for Active Orbital Selection in Multiconfigurational Calculations. *Journal of Chemical Theory and Computation* **2020**, *16* (12), 7328-7341, Article. DOI: 10.1021/acs.jctc.0c00123.
- (55) Yadav, N.; Gogada, R.; O'Malley, J.; Gundampati, R. K.; Jayanthi, S.; Hashmi, S.; Lella, R.; Zhang, D. M.; Wang, J. M.; Kumar, R.; et al. Molecular insights on cytochrome c and nucleotide regulation of apoptosome function and its implication in cancer. *Biochimica et Biophysica Acta-Molecular Cell Research* **2020**, *1867* (1), Article. DOI: 10.1016/j.bbamcr.2019.118573.
- (56) Zhang, Y. L.; Robinson, D. A.; McKelvey, K.; Ren, H.; White, H. S.; Edwards, M. A. A High-Pressure System for Studying Oxygen Reduction During Pt Nanoparticle Collisions. *Journal of the Electrochemical Society* **2020**, *167* (16), Article. DOI: 10.1149/1945-7111/abcde2.

2019 (n=67)

- (1) Acharya, P.; Nelson, Z. J.; Benamara, M.; Manso, R. H.; Bakovic, S. I. P.; Abolhassani, M.; Lee, S.; Reinhart, B.; Chen, J.; Greenlee, L. F. Chemical Structure of Fe-Ni Nanoparticles for Efficient Oxygen Evolution Reaction Electrocatalysis. *ACS Omega* **2019**, *4* (17), 17209-17222, Article. DOI: 10.1021/acsomega.9b01692.
- (2) Afrose, F.; McKay, M. J.; Mortazavi, A.; Kumar, V. S.; Greathouse, D. V.; Koeppe, R. E. Transmembrane Helix Integrity versus Fraying To Expose Hydrogen Bonds at a Membrane-Water Interface. *Biochemistry* **2019**, *58* (6), 633-645, Article. DOI: 10.1021/acs.biochem.8b01119.
- (3) Ahrens, C. J.; Chevrier, V. F. Compressional Ridges on Baret Montes, Pluto as Observed by New Horizons. *Geophysical Research Letters* **2019**, *46* (24), 14328-14335, Article. DOI: 10.1029/2019gl085648.

- (4) Al Faouri, R.; Krueger, E.; Kumar, V. G.; Folgea, D.; Straub, D.; Alismail, H.; Alfaori, Q.; Kight, A.; Ray, J.; Henry, R.; et al. An Effective Electric Dipole Model for Voltage-induced Gating Mechanism of Lysenin. *Scientific Reports* **2019**, *9*, Article. DOI: 10.1038/s41598-019-47725-0.
- (5) Alqahtany, M.; Khadka, P.; Niyonshuti, I.; Krishnamurthi, V. R.; Sadoon, A. A.; Challapalli, S. D.; Chen, J.; Wang, Y. Nanoscale reorganizations of histone-like nucleoid structuring proteins in Escherichia coli are caused by silver nanoparticles. *Nanotechnology* **2019**, *30* (38), Article. DOI: 10.1088/1361-6528/ab2a9f.
- (6) Balayeva, N. O.; Zheng, N.; Dillert, R.; Bahnemann, D. W. Visible-Light-Mediated Photocatalytic Aerobic Dehydrogenation of N-heterocycles by Surface-Grafted TiO₂ and 4-amino-TEMPO. *ACS Catalysis* **2019**, *9* (12), 10694-10704, Article. DOI: 10.1021/acscatal.9b03322.
- (7) Black, R. E.; Kilyanek, S. M.; Reinhart, E. D.; Jordan, R. F. Olefin Insertion Reactivity of a (Phosphine-arenesulfonate)Palladium(II) Fluoride Complex. *Organometallics* **2019**, *38* (21), 4250-4260, Article. DOI: 10.1021/acs.organomet.9b00545.
- (8) Cafferty, B. J.; Yuan, L.; Baghbanzadeh, M.; Rapoport, D.; Beyzavi, M. H.; Whitesides, G. M. Charge Transport through Self-Assembled Monolayers of Monoterpenoids. *Angewandte Chemie-International Edition* **2019**, *58* (24), 8097-8102, Article. DOI: 10.1002/anie.201902997.
- (9) Chen, H.; Venkat, S.; Hudson, D.; Wang, T.; Gan, Q.; Fan, C. Site-Specifically Studying Lysine Acetylation of Aminoacyl-tRNA Synthetases. *ACS Chemical Biology* **2019**, *14* (2), 288-295, Article. DOI: 10.1021/acschembio.8b01013.
- (10) Chen, S. R.; Niu, C. J.; Lee, H.; Li, Q. Y.; Yu, L.; Xu, W.; Zhang, J. G.; Dufek, E. J.; Whittingham, M. S.; Meng, S.; et al. Critical Parameters for Evaluating Coin Cells and Pouch Cells of Rechargeable Li-Metal Batteries. *Joule* **2019**, *3* (4), 1094-1105, Article. DOI: 10.1016/j.joule.2019.02.004.
- (11) Chen, S.; Wu, H.; Tao, J.; Xin, H.; Zhu, Y.; Chen, J. Pt-Ni Seed-Core-Frame Hierarchical Nanostructures and Their Conversion to Nanoframes for Enhanced Methanol Electro-Oxidation. *Catalysts* **2019**, *9* (1), Article. DOI: 10.3390/catal9010039.
- (12) Cordier, D.; Bonhommeau, D. A.; Port, S.; Chevrier, V.; Lebonnois, S.; Garcia-Sanchez, F. The Physical Origin of the Venus Low Atmosphere Chemical Gradient. *Astrophysical Journal* **2019**, *880* (2), Article. DOI: 10.3847/1538-4357/ab27bd.
- (13) Czaplinski, E. C.; Gilbertson, W. A.; Farnsworth, K. K.; Chevrier, V. F. Experimental Study of Ethylene Evaporites under Titan Conditions. *ACS Earth and Space Chemistry* **2019**, *3* (10), 2353-2362, Article. DOI: 10.1021/acsearthspacechem.9b00204.
- (14) Diaz Perez, A.; Kougl, K.; Vasicek, T. W.; Liyanage, R.; Lay, J.; Stenken, J. A. Microdialysis Sampling of Quorum Sensing Homoserine Lactones during Biofilm Formation. *Analytical Chemistry* **2019**, *91* (6), 3964-3970, Article. DOI: 10.1021/acs.analchem.8b05168.
- (15) Farnsworth, K. K.; Chevrier, V. F.; Steckloff, J. K.; Laxton, D.; Singh, S.; Soto, A.; Soderblom, J. M. Nitrogen Exsolution and Bubble Formation in Titan's Lakes. *Geophysical Research Letters* **2019**, *46* (23), 13658-13667, Article. DOI: 10.1029/2019gl084792.

- (16) Fereidoonnezhad, M.; Mirsadeghi, H. A.; Abedanzadeh, S.; Yazdani, A.; Alamdarlou, A.; Babaghasabha, M.; Almansaf, Z.; Faghah, Z.; McConnell, Z.; Shahsavari, H. R.; et al. Synthesis and biological evaluation of thiolate gold(i) complexes as thioredoxin reductase (TrxR) and glutathione reductase (GR) inhibitors. *New Journal of Chemistry* **2019**, *43* (33), 13173-13182, Article. DOI: 10.1039/c9nj02502b.
- (17) Haehnel, V.; Khan, F. Z.; Mutschke, G.; Cierpka, C.; Uhlemann, M.; Fritsch, I. Combining magnetic forces for contactless manipulation of fluids in microelectrode-microfluidic systems. *Scientific Reports* **2019**, *9*, Article. DOI: 10.1038/s41598-019-41284-0.
- (18) Harkey, T.; Kumar, V. G.; Hettige, J.; Tabari, S. H.; Immadisetty, K.; Moradi, M. The Role of a Crystallographically Unresolved Cytoplasmic Loop in Stabilizing the Bacterial Membrane Insertase YidC2. *Scientific Reports* **2019**, *9*, Article. DOI: 10.1038/s41598-019-51052-9.
- (19) Immadisetty, K.; Hettige, J.; Moradi, M. Lipid-Dependent Alternating Access Mechanism of a Bacterial Multidrug ABC Exporter. *ACS Central Science* **2019**, *5* (1), 43-56, Article. DOI: 10.1021/acscentsci.8b00480.
- (20) Jenkins, S. V.; Nedosekin, D. A.; Shaulis, B. J.; Wang, T.; Jamshidi-Parsian, A.; Pollock, E. D.; Chen, J.; Dings, R. P. M.; Griffin, R. J. Enhanced Photothermal Treatment Efficacy and Normal Tissue Protection via Vascular Targeted Gold Nanocages. *Nanotheranostics* **2019**, *3* (2), 145-155, Article. DOI: 10.7150/ntno.32395 From PubMed.
- (21) Kang, S. W.; Jayanthi, S.; Nagarajan, G.; Kumar, T. K. S.; Kuenzel, W. J. Identification of avian vasotocin receptor subtype-specific antagonists involved in the stress response of the chicken, *Gallus gallus*. *Journal of Biomolecular Structure & Dynamics* **2019**, *37* (7), 1685-1699, Article. DOI: 10.1080/07391102.2018.1464957.
- (22) Kapoor, R.; Peyear, T. A.; Koeppe, R. E.; Andersen, O. S. Antidepressants are modifiers of lipid bilayer properties. *Journal of General Physiology* **2019**, *151* (3), 342-356, Article. DOI: 10.1085/jgp.201812263.
- (23) Kerr, R.; Agrawal, S.; Maity, S.; Koppolu, B.; Jayanthi, S.; Kumar, G. S.; Gundampati, R. K.; McNabb, D. S.; Zaharoff, D. A.; Kumar, T. K. S. Design of a thrombin resistant human acidic fibroblast growth factor (hFGF1) variant that exhibits enhanced cell proliferation activity. *Biochemical and Biophysical Research Communications* **2019**, *518* (2), 191-196, Article. DOI: 10.1016/j.bbrc.2019.08.029.
- (24) Khan, F. Z.; Fritsch, I. Chip-Scale Electrodeposition and Analysis of Poly(3,4-ethylenedioxythiophene) (PEDOT) Films for Enhanced and Sustained Microfluidics Using DC-Redox-Magnetohydrodynamics. *Journal of the Electrochemical Society* **2019**, *166* (13), H615-H627, Article. DOI: 10.1149/2.0811913jes.
- (25) Krishnamurthi, V. R.; Chen, J.; Wang, Y. Silver ions cause oscillation of bacterial length of *Escherichia coli*. *Scientific Reports* **2019**, *9*, Article. DOI: 10.1038/s41598-019-48113-4.
- (26) Leong, K.-Y.; Wang, F. On approximating a weak Markovian process as Markovian: Are we justified when discarding longtime correlations. *Journal of Chemical Physics* **2019**, *150* (8), Article. DOI: 10.1063/1.5056242.
- (27) Li, J.; Wang, F. Surface Penetration without Enrichment: Simulations Show Ion Surface Propensities Consistent with Both Elevated Surface Tension and Surface Sensitive Spectroscopy. *Journal of Physical Chemistry B* **2019**, *123* (33), 7197-7203, Article. DOI: 10.1021/acs.jpcb.9b04424.

- (28) Liang, Z.; Song, L.; Deng, S.; Zhu, Y.; Stavitski, E.; Adzic, R. R.; Chen, J.; Wang, J. X. Direct 12-Electron Oxidation of Ethanol on a Ternary Au(core)-PtIr(Shell) Electrocatalyst. *Journal of the American Chemical Society* **2019**, *141* (24), 9629-9636, Article. DOI: 10.1021/jacs.9b03474.
- (29) Lipinski, K.; McKay, M. J.; Afrose, F.; Martfeld, A. N.; Koeppe, R. E.; Greathouse, D. V. Influence of Lipid Saturation, Hydrophobic Length and Cholesterol on Double-Arginine-Containing Helical Peptides in Bilayer Membranes. *ChemBioChem* **2019**, *20* (21), 2784-2792, Article. DOI: 10.1002/cbic.201900282.
- (30) Lochala, J.; Taverne, T.; Wu, B. B.; Benamara, M.; Cai, M.; Xiao, X. C.; Xiao, J. Tuning Solid Electrolyte Interphase Layer Properties through the Integration of Conversion Reaction. *ACS Applied Materials & Interfaces* **2019**, *11* (47), 44204-44213, Article. DOI: 10.1021/acsami.9b13878.
- (31) Lowe, J. M.; Coridan, R. H. Mechanistic control of a galvanic replacement reaction on cuprous oxide. *Nanoscale Advances* **2019**, *1* (4), 1343-1350, Article. DOI: 10.1039/c8na00396c.
- (32) Ma, Z.; Thersleff, T.; Goerne, A. L.; Cordes, N.; Liu, Y.; Jakobi, S.; Rokicinska, A.; Schichtl, Z. G.; Coridan, R. H.; Kustrowski, P.; et al. Quaternary Core-Shell Oxynitride Nanowire Photoanode Containing a Hole-Extraction Gradient for Photoelectrochemical Water Oxidation. *ACS Applied Materials & Interfaces* **2019**, *11* (21), 19077-19086, Article. DOI: 10.1021/acsami.9b02483.
- (33) Majnooni, S.; Almansaf, Z.; Tsuji, M.; Khosropoura, A. R.; Zali-Boeini, H.; Beyzavi, M. H. Straightforward and Expedited One-Pot Tandem Synthesis of 3,5-Diaryl-1,2,4-Selenadiazoles from Aryl Nitriles. *Synthesis-Stuttgart* **2019**, *51* (22), 4279-4283, Article. DOI: 10.1055/s-0039-1690126.
- (34) Majnooni, S.; Duffield, J.; Price, J.; Khosropoura, A. R.; Zali-Boeini, H.; Beyzavi, M. H. Aryliodoazide Synthons: A Different Approach for Diversified Synthesis of 2-Aminothiazole, 1,3-Thiazole, and 1,3-Selenazole Scaffolds. *ACS Combinatorial Science* **2019**, *21* (7), 516-521, Article. DOI: 10.1021/acscombsci.9b00045.
- (35) Manso, R. H.; Acharya, P.; Deng, S.; Crane, C. C.; Reinhart, B.; Lee, S.; Tong, X.; Nykypanchuk, D.; Zhu, J.; Zhu, Y.; et al. Controlling the 3-D morphology of Ni-Fe-based nanocatalysts for the oxygen evolution reaction. *Nanoscale* **2019**, *11* (17), 8170-8184, Article. DOI: 10.1039/c8nr10138h.
- (36) McKay, M. J.; Fu, R. Q.; Greathouse, D. V.; Koeppe, R. E. Breaking the Backbone: Central Arginine Residues Induce Membrane Exit and Helix Distortions within a Dynamic Membrane Peptide. *Journal of Physical Chemistry B* **2019**, *123* (38), 8034-8047, Article. DOI: 10.1021/acs.jpcb.9b06034.
- (37) Moraes de Freitas, G.; Thomas, J.; Liyanage, R.; Lay, J. O.; Basu, S.; Ramegowda, V.; Nogueira do Amaral, M.; Benitez, L. C.; Bolacel Braga, E. J.; Pereira, A. Cold tolerance response mechanisms revealed through comparative analysis of gene and protein expression in multiple rice genotypes. *PLoS One* **2019**, *14* (6), Article. DOI: 10.1371/journal.pone.0218019.
- (38) Mosleh, I.; Benamara, M.; Greenlee, L.; Beyzavi, M. H.; Beitle, R. Recombinant peptide fusion proteins enable palladium nanoparticle growth. *Materials Letters* **2019**, *252*, 68-71, Article. DOI: 10.1016/j.matlet.2019.05.080.

- (39) Nguyen, K. G.; Gillam, F. B.; Hopkins, J. J.; Jayanthi, S.; Gundampati, R. K.; Su, G.; Bear, J.; Pilkington, G. R.; Jalah, R.; Felber, B. K.; et al. Molecular mechanisms of heparin-induced modulation of human interleukin 12 bioactivity. *Journal of Biological Chemistry* **2019**, *294* (12), 4412-4424, Article. DOI: 10.1074/jbc.ra118.006193.
- (40) Ni, Z. G.; Wang, Y. Q.; Li, W.; Pulay, P.; Li, S. H. Analytical Energy Gradients for the Cluster-in-Molecule MP2 Method and Its Application to Geometry Optimizations of Large Systems. *Journal of Chemical Theory and Computation* **2019**, *15* (6), 3623-3634, Article. DOI: 10.1021/acs.jctc.9b00259.
- (41) Niu, C. J.; Lee, H.; Chen, S. R.; Li, Q. Y.; Du, J.; Xu, W.; Zhang, J. G.; Whittingham, M. S.; Xiao, J.; Liu, J. High-energy lithium metal pouch cells with limited anode swelling and long stable cycles. *Nature Energy* **2019**, *4* (7), 551-559, Article. DOI: 10.1038/s41560-019-0390-6.
- (42) Nur, T.; Gautam, S. H.; Stenken, J. A.; Shew, W. L. Probing spatial inhomogeneity of cholinergic changes in cortical state in rat. *Scientific Reports* **2019**, *9*, Article. DOI: 10.1038/s41598-019-45826-4.
- (43) Rath, N. C.; Gupta, A.; Liyanage, R.; Lay, J. O., Jr. Phorbol 12-Myristate 13-Acetate-Induced Changes in Chicken Enterocytes. *Proteomics Insights* **2019**, *10*, Article. DOI: 10.1177/1178641819840369 From PubMed.
- (44) Sakamaki, Y.; Mirsadeghi, H. A.; Fereidoonnezhad, M.; Mirzaei, F.; Dehkordi, Z. M.; Chamyani, S.; Alshami, M.; Abedanzadeh, S.; Shahsavari, H. R.; Beyzavi, M. H. trans-Platinum(II) Thionate Complexes: Synthesis, Structural Characterization, and in vitro Biological Assessment as Potent Anticancer Agents. *ChemPlusChem* **2019**, *84* (10), 1525-1535, Article. DOI: 10.1002/cplu.201900394.
- (45) Scharlau, M.; Geren, L.; Zhen, E. Y.; Ma, L.; Rajagukguk, R.; Ferguson-Miller, S.; Durham, B.; Millett, F. Definition of the Interaction Domain and Electron Transfer Route between Cytochrome c and Cytochrome Oxidase. *Biochemistry* **2019**, *58* (40), 4125-4135, Article. DOI: 10.1021/acs.biochem.9b00646.
- (46) Shafiee, B.; Duffield, J.; Timm, R.; Liyanage, R.; Lay, J. O.; Khosropour, A. R.; Rudbari, H. A.; Beyzavi, M. H. Metal-free and benign approach for the synthesis of dihydro-5' H- spiro[benzo[c] chromene8,4'- oxazole]-5', 6(7H)- dione scaffolds as masked amino acids plus circle plus. *Green Chemistry* **2019**, *21* (10), 2656-2661, Article. DOI: 10.1039/c9gc00428a.
- (47) Shahsavari, H. R.; Gimenez, N.; Lalinde, E.; Moreno, M. T.; Fereidoonnezhad, M.; Aghakhanpour, R. B.; Khatami, M.; Kalantari, F.; Jamshidi, Z.; Mohammadpour, M. Heterobimetallic Pt-II-Au-I Complexes Comprising Unsymmetrical 1,1-Bis(diphenylphosphanyl)methane Bridges: Synthesis, Photophysical, and Cytotoxic Studies. *European Journal of Inorganic Chemistry* **2019**, *2019* (10), 1360-1373, Article. DOI: 10.1002/ejic.201801297.
- (48) Sharma, B.; Striegler, S. Tailored Interactions of the Secondary Coordination Sphere Enhance the Hydrolytic Activity of Cross-Linked Microgels. *ACS Catalysis* **2019**, *9* (3), 1686-1691, Article. DOI: 10.1021/acscatal.8b04740.
- (49) Song, J.; Lin, L.; Yang, Z.; Zhu, R.; Zhou, Z.; Li, Z.-W.; Wang, F.; Chen, J.; Yang, H.; Chen, X. Self-Assembled Responsive Bilayered Vesicles with Adjustable Oxidative Stress for Enhanced Cancer Imaging and Therapy. *Journal of the American Chemical Society* **2019**, *141* (20), 8158-8170, Article. DOI: 10.1021/jacs.8b13902.
- (50) Stebbins, N. B.; Howard, L. R.; Prior, R. L.; Brownmiller, C.; Liyanage, R.; Lay, J. O. Formation, Tentative Mass Spectrometric Identification, and Color Stability of Acetaldehyde-Catalyzed Condensation of Red Radish

(Raphanus sativus) Anthocyanins and (+) Catechin. *Beverages* **2019**, *5* (4), Article. DOI: 10.3390/beverages5040064.

(51) Thapa, R.; Kilyanek, S. M. (2,2-Bipyridine- κ 2N,N')chlorido[η 6-1-methyl-4-(propan-2-yl)benzene]ruthenium(II) tetraphenylborate. *IUCrData* **2019**, *4* (7), Article. DOI: 10.1107/s241431461901006x.

(52) Thapa, R.; Kilyanek, S. M. Synthesis and structural characterization of 20-membered macrocyclic rings bearing trans-chelating bis(N-heterocyclic carbene) ligands and the catalytic activity of their palladium(ii) complexes. *Dalton Transactions* **2019**, *48* (33), 12577-12590, Article. DOI: 10.1039/c9dt02147g.

(53) Thapa, R.; Kilyanek, S. M. Synthesis and structural characterization of iridium(I) complexes of 20-membered macrocyclic rings bearing chelating bis(N-heterocyclic carbene) ligands. *Acta Crystallographica Section C-Crystal Structure Communications* **2019**, *75*, 1652-1657, Article. DOI: 10.1107/s2053229619015006.

(54) Thapa, R.; Kilyanek, S. M. Synthesis and structural characterization of nickel(II) complexes of 20-membered macrocyclic rings bearing chelating bis(N-heterocyclic carbene) ligands. *Journal of Organometallic Chemistry* **2019**, *901*, Article. DOI: 10.1016/j.jorgchem.2019.120937.

(55) Tran, R.; Kilyanek, S. M. Deoxydehydration of polyols catalyzed by a molybdenum dioxo-complex supported by a dianionic ONO pincer ligand. *Dalton Transactions* **2019**, *48* (43), 16304-16311, Article. DOI: 10.1039/c9dt03759d.

(56) Venkat, S.; Chen, H.; McGuire, P.; Stahman, A.; Gan, Q.; Fan, C. Characterizing lysine acetylation of Escherichia coli type II citrate synthase. *FEBS Journal* **2019**, *286* (14), 2799-2808, Article. DOI: 10.1111/febs.14845.

(57) Wang, Q. C.; Zou, J. X.; Xu, E. H.; Pulay, P.; Li, S. H. Automatic Construction of the Initial Orbitals for Efficient Generalized Valence Bond Calculations of Large Systems. *Journal of Chemical Theory and Computation* **2019**, *15* (1), 141-153, Article. DOI: 10.1021/acs.jctc.8b00854.

(58) Wang, Q.; Hu, J.; Zheng, N. A Photocatalyzed Cascade Approach Toward the Tetracyclic Core of Akuammiline Alkaloids. *Organic Letters* **2019**, *21* (3), 614-617, Article. DOI: 10.1021/acs.orglett.8b03648.

(59) Wang, Q.; Zheng, N. Difunctionalization of Cyclopropyl Amines with N-Iodosuccinimide (NIS) or in Situ Formed Cyanogen Iodide (ICN). *Organic Letters* **2019**, *21* (24), 9999-10002, Article. DOI: 10.1021/acs.orglett.9b03922.

(60) Wang, T.; Jones, J. D.; Niyonshuti, I. I.; Agrawal, S.; Gundampati, R. K.; Kumar, T. K. S.; Quinn, K. P.; Chen, J. Biocompatible, Injectable Anionic Hydrogels Based on Poly(Oligo Ethylene Glycol Monoacrylate-co-Acrylic Acid) for Protein Delivery. *Advanced Therapeutics* **2019**, *2* (9), Article. DOI: 10.1002/adtp.201900092.

(61) Wu, B. B.; Yang, Y.; Liu, D. Y.; Niu, C. J.; Gross, M.; Seymour, L.; Lee, H.; Le, P. M. L.; Vo, T. D.; Deng, Z. D.; et al. Good Practices for Rechargeable Lithium Metal Batteries. *Journal of the Electrochemical Society* **2019**, *166* (16), A4141-A4149, Article. DOI: 10.1149/2.0691916jes.

- (62) Yuan, Y.; Ma, Z.; Wang, F. Leveraging local MP2 to reduce basis set superposition errors: An efficient first-principles based force-field for carbon dioxide. *Journal of Chemical Physics* **2019**, *151* (18), Article. DOI: 10.1063/1.5124811.
- (63) Zamani, P.; Phipps, J.; Hu, J. Y.; Heema, F. C.; Rudbari, H. A.; Bordbar, A. K.; Khosropour, A. R.; Beyzavi, M. H. Multicomponent Synthesis of Diversified Chromeno[3,2-d]oxazoles. *ACS Combinatorial Science* **2019**, *21* (8), 557-561, Article. DOI: 10.1021/acscombsci.9b00084.
- (64) Zare, A.; Khanivar, R.; Irannejad-Gheshlaghchaei, N.; Beyzavi, M. H. A Nanostructured Organic-Inorganic Hybrid Material: Preparation, Characterization and Catalytic Performance for the Synthesis of N,N'-Alkylidene Bisamides. *Chemistryselect* **2019**, *4* (13), 3953-3960, Article. DOI: 10.1002/slct.201900220.
- (65) Zare, A.; Kohzadian, A.; Abshirini, Z.; Sajadikhah, S. S.; Phipps, J.; Benamara, M.; Beyzavi, M. H. Nano-2-(dimethylamino)-N-(silica-n-propyl)-N,N-dimethylethanaminium chloride as a novel basic catalyst for the efficient synthesis of pyrido[2,3-d:6,5-d]dipyrimidines. *New Journal of Chemistry* **2019**, *43* (5), 2247-2257, Article. DOI: 10.1039/c8nj04921a.
- (66) Zhuang, L.; Wang, R.; Lindberg, G. E.; Hu, H.; Li, X.-Z.; Wang, F. From a Liquid to a Crystal without Going through a First-Order Phase Transition: Determining the Free Energy of Melting with Glassy Intermediates. *Journal of Physical Chemistry B* **2019**, *123* (36), 7740-7747, Article. DOI: 10.1021/acs.jpcb.9b06840.
- (67) Zong, G. H.; Hu, Z. J.; O'Keefe, S.; Tranter, D.; Iannotti, M. J.; Baron, L.; Hall, B.; Corfield, K.; Paatero, A. O.; Henderson, M. J.; et al. Ipomoeassin F Binds Sec61 alpha to Inhibit Protein Translocation. *Journal of the American Chemical Society* **2019**, *141* (21), 8450-8461, Article. DOI: 10.1021/jacs.8b13506.

2018 (n=61)

- (1) Alkhateib, K.; Poseno, T. M.; Diaz Perez, A.; Durdik, J. M.; Stenken, J. A. Iloprost Affects Macrophage Activation and CCL2 Concentrations in a Microdialysis Model in Rats. *Pharmaceutical Research* **2018**, *35* (1), Article. DOI: 10.1007/s11095-017-2277-1.
- (2) Bauer, L.; Ferla, S.; Head, S. A.; Bhat, S.; Pasunooti, K. K.; Shi, W. Q.; Albulescu, L.; Liu, J. O.; Brancale, A.; van Kuppeveld, F. J. M.; et al. Structure-activity relationship study of itraconazole, a broad-range inhibitor of picornavirus replication that targets oxysterol-binding protein (OSBP). *Antiviral Research* **2018**, *156*, 55-63, Article. DOI: 10.1016/j.antiviral.2018.05.010.
- (3) Burgin, S. R.; Oramous, J.; Kaminski, M.; Stocker, L.; Moradi, M. High school biology students use of visual molecular dynamics as an authentic tool for learning about modeling as a professional scientific practice. *Biochemistry and Molecular Biology Education* **2018**, *46* (3), 230-236, Article. DOI: 10.1002/bmb.21113.
- (4) Caviness, P.; Bauer, R.; Tanaka, K.; Janowska, K.; Roeser, J. R.; Harter, D.; Sanders, J.; Ruth, C.; Matsushita, O.; Sakon, J. Ca²⁺-induced orientation of tandem collagen binding domains from clostridial collagenase ColG permits two opposing functions of collagen fibril formation and retardation. *FEBS Journal* **2018**, *285* (17), 3254-3269, Article. DOI: 10.1111/febs.14611.

- (5) Chen, H.; Venkat, S.; Wilson, J.; McGuire, P.; Chang, A. L.; Gan, Q.; Fan, C. Genome-Wide Quantification of the Effect of Gene Overexpression on Escherichia coli Growth. *Genes* **2018**, *9* (8), Article. DOI: 10.3390/genes9080414.
- (6) Coridan, R. H.; Norman, M. A.; Mehrabi, H. Enhanced light absorption in simulations of ultra-thin ZnO layers structured by a SiO₂ photonic glass. *Canadian Journal of Chemistry-Revue Canadienne de Chimie* **2018**, *96* (11), 969-973, Article. DOI: 10.1139/cjc-2018-0218.
- (7) Davis, J. E.; Alghanmi, A.; Gundampati, R. K.; Jayanthi, S.; Fields, E.; Armstrong, M.; Weidling, V.; Shah, V.; Agrawal, S.; Koppolu, B. p.; et al. Probing the role of proline-135 on the structure, stability, and cell proliferation activity of human acidic fibroblast growth factor. *Archives of Biochemistry and Biophysics* **2018**, *654*, 115-125, Article. DOI: 10.1016/j.abb.2018.07.017.
- (8) Davis, J. E.; Gundampati, R. K.; Jayanthi, S.; Anderson, J.; Pickhardt, A.; Koppolu, B. P.; Zaharoff, D. A.; Kumar, T. K. S. Effect of extension of the heparin binding pocket on the structure, stability, and cell proliferation activity of the human acidic fibroblast growth factor. *Biochemistry and Biophysics Reports* **2018**, *13*, 45-57, Article. DOI: 10.1016/j.bbrep.2017.12.001.
- (9) Feng, L.; Sharma, A.; Niu, F.; Huang, Y.; Lafuente, J. V.; Muresanu, D. F.; Ozkizilcik, A.; Tian, Z. R.; Sharma, H. S. TiO₂-Nanowired Delivery of DL-3-n-butylphthalide (DL-NBP) Attenuates Blood-Brain Barrier Disruption, Brain Edema Formation, and Neuronal Damages Following Concussive Head Injury. *Molecular Neurobiology* **2018**, *55* (1), 350-358, Article. DOI: 10.1007/s12035-017-0746-5.
- (10) Fereidoonnezhad, M.; Shahsavari, H. R.; Abedanzadeh, S.; Behchenari, B.; Hossein-Abadi, M.; Faghah, Z.; Beyzavi, M. H. Cycloplatinated(II) complexes bearing 1,1'-bis(diphenylphosphino)ferrocene ligand: biological evaluation and molecular docking studies. *New Journal of Chemistry* **2018**, *42* (4), 2385-2392, Article. DOI: 10.1039/c7nj04183g.
- (11) Fereidoonnezhad, M.; Shahsavari, H. R.; Abedanzadeh, S.; Nezafati, A.; Khazali, A.; Mastrorilli, P.; Babaghasabha, M.; Webb, J.; Faghah, Z.; Faghah, Z.; et al. Synthesis, structural characterization, biological evaluation and molecular docking studies of new platinum(II) complexes containing isocyanides. *New Journal of Chemistry* **2018**, *42* (11), 8681-8692, Article. DOI: 10.1039/c7nj04819j.
- (12) Fereidoonnezhad, M.; Shahsavari, H. R.; Lotfi, E.; Babaghasabha, M.; Fakhri, M.; Faghah, Z.; Faghah, Z.; Beyzavi, M. H. (Benzyl isocyanide)gold(I) pyrimidine-2-thiolate complex: Synthesis and biological activity. *Applied Organometallic Chemistry* **2018**, *32* (3), Article. DOI: 10.1002/aoc.4200.
- (13) Hua, L. C.; Zheng, J.; Zhou, Z. R.; Tian, Z. R. Water-Switchable Interfacial Bonding on Tooth Enamel Surface. *ACS Biomaterials Science & Engineering* **2018**, *4* (7), 2364-2369, Article. DOI: 10.1021/acsbiomaterials.8b00403.
- (14) Humagain, G.; MacDougal, K.; MacInnis, J.; Lowe, J. M.; Coridan, R. H.; MacQuarrie, S.; Dasog, M. Highly Efficient, Biochar-Derived Molybdenum Carbide Hydrogen Evolution Electrocatalyst. *Advanced Energy Materials* **2018**, *8* (29), Article. DOI: 10.1002/aenm.201801461.
- (15) Jenkins, S. V.; Nedosekin, D. A.; Miller, E. K.; Zharov, V. P.; Dings, R. P. M.; Chen, J.; Griffin, R. J. Galectin-1-based tumour-targeting for gold nanostructure-mediated photothermal therapy. *International Journal of Hyperthermia* **2018**, *34* (1), 19-29, Article. DOI: 10.1080/02656736.2017.1317845.

- (16) Kajani, A. A.; Bordbar, A. K.; Mehrgardi, M. A.; Zarkesh-Esfahani, S. H.; Motaghi, H.; Kardi, M.; Khosropour, A. R.; Ozdemir, J.; Benamara, M.; Beyzavi, M. H. Green and Facile Synthesis of Highly Photoluminescent Multicolor Carbon Nanocrystals for Cancer Therapy and Imaging. *ACS Applied Bio Materials* **2018**, *1* (5), 1458-1467, Article. DOI: 10.1021/acsabm.8b00407.
- (17) Kearney, S. E.; Zahoransky-Kohalmi, G.; Brimacombe, K. R.; Henderson, M. J.; Lynch, C.; Zhao, T. G.; Wan, K. K.; Itkin, Z.; Dillon, C.; Shen, M.; et al. Canvass: A Crowd-Sourced, Natural-Product Screening Library for Exploring Biological Space. *ACS Central Science* **2018**, *4* (12), 1727-1741, Article. DOI: 10.1021/acscentsci.8b00747.
- (18) Khan, F. Z.; Hutcheson, J. A.; Hunter, C. J.; Powless, A. J.; Benson, D.; Fritsch, I.; Muldoon, T. J. Redox-Magnetohydrodynamically Controlled Fluid Flow with Poly(3,4-ethylenedioxythiophene) Coupled to an Epitaxial Light Sheet Confocal Microscope for Image Cytometry Applications. *Analytical Chemistry* **2018**, *90* (13), 7862-7870, Article. DOI: 10.1021/acs.analchem.7b05312.
- (19) Kiaei, M.; Balasubramaniam, M.; Kumar, V. G.; Shmookler Reis, R. J.; Moradi, M.; Varughese, K. I. ALS-causing mutations in profilin-1 alter its conformational dynamics: A computational approach to explain propensity for aggregation. *Scientific Reports* **2018**, *8*, Article. DOI: 10.1038/s41598-018-31199-7.
- (20) Lafuente, J. V.; Sharma, A.; Muresanu, D. F.; Ozkizilcik, A.; Tian, Z. R.; Patnaik, R.; Sharma, H. S. Repeated Forced Swim Exacerbates Methamphetamine-Induced Neurotoxicity: Neuroprotective Effects of Nanowired Delivery of 5-HT3-Receptor Antagonist Ondansetron. *Molecular Neurobiology* **2018**, *55* (1), 322-334, Article. DOI: 10.1007/s12035-017-0744-7.
- (21) Lee, H.; Lim, H. S.; Ren, X. D.; Yu, L.; Engelhard, M. H.; Han, K. S.; Lee, J.; Kim, H. T.; Xiao, J.; Liu, J.; et al. Detrimental Effects of Chemical Crossover from the Lithium Anode to Cathode in Rechargeable Lithium Metal Batteries. *ACS Energy Letters* **2018**, *3* (12), 2921-2930, Article. DOI: 10.1021/acsenergylett.8b01819.
- (22) Leong, K.-Y.; Wang, F. A molecular dynamics investigation of the surface tension of water nanodroplets and a new technique for local pressure determination through density correlation. *Journal of Chemical Physics* **2018**, *148* (14), Article. DOI: 10.1063/1.5004985.
- (23) Li, J.; Sun, K.; Li, J.; Meng, Q.; Fu, X.; Yin, W.-G.; Lu, D.; Li, Y.; Babzien, M.; Fedurin, M.; et al. Probing the pathway of an ultrafast structural phase transition to illuminate the transition mechanism in Cu₂S. *Applied Physics Letters* **2018**, *113* (4), Article. DOI: 10.1063/1.5032132.
- (24) Lorand, J.-P.; Pont, S.; Chevrier, V.; Luguet, A.; Zanda, B.; Hewins, R. Petrogenesis of martian sulfides in the Chassigny meteorite. *American Mineralogist* **2018**, *103* (6), 872-885, Article. DOI: 10.2138/am-2018-6334.
- (25) Manso, R. H.; Song, L.; Liang, Z.; Wang, J. X.; Chen, J. CuPt and CuPtRu nanostructures for ammonia oxidation reaction. *ECS Transactions* **2018**, *85* (12, Electrocatalysis 9: Symposium in Honor of Radoslav Adzic, 2018), 177-182, Article. DOI: 10.1149/08512.0177ecst.
- (26) Mathurin, L. E.; Benamara, M.; Tao, J.; Zhu, Y.; Chen, J. Tailoring the Surface Structures of CuPt and CuPtRu 1D Nanostructures by Coupling Coreduction with Galvanic Replacement. *Particle & Particle Systems Characterization* **2018**, *35* (5), Article. DOI: 10.1002/ppsc.201800053.

- (27) Mathurin, L. E.; Tao, J.; Xin, H.; Li, J.; Zhu, Y.; Chen, J. Dendritic Core-Frame and Frame Multimetalllic Rhombic Dodecahedra: A Comparison Study of Composition and Structure Effects on Electrocatalysis of Methanol Oxidation. *ChemNanoMat* **2018**, *4* (1), 76-87, Article. DOI: 10.1002/cnma.201700249.
- (28) McKay, M. J.; Martfeld, A. N.; De Angelis, A. A.; Opella, S. J.; Greathouse, D. V.; Koeppen, R. E. Control of Transmembrane Helix Dynamics by Interfacial Tryptophan Residues. *Biophysical Journal* **2018**, *114* (11), 2617-2629, Article. DOI: 10.1016/j.bpj.2018.04.016.
- (29) McSweeney, J. C.; Hudson, T. J.; Prince, L.; Benes, H.; Tackett, A. J.; Robinson, C. M.; Koeppen, R.; Cornett, L. E. Impact of the INBRE summer student mentored research program on undergraduate students in Arkansas. *Advances in Physiology Education* **2018**, *42* (1), 123-129, Article. DOI: 10.1152/advan.00127.2017.
- (30) Meeker, D. G.; Wang, T.; Harrington, W. N.; Zharov, V. P.; Johnson, S. A.; Jenkins, S. V.; Oyibo, S. E.; Walker, C. M.; Mills, W. B.; Shirtliff, M. E.; et al. Versatility of targeted antibiotic-loaded gold nanoconstructs for the treatment of biofilm-associated bacterial infections. *International Journal of Hyperthermia* **2018**, *34* (2), 209-219, Article. DOI: 10.1080/02656736.2017.1392047.
- (31) Muhoza, D.; Duverna, E.; Adams, P. D. Trypsin as a Biochemical Tool for the Characterization of Ras-Related Protein Structure and Function. *Journal of Science and Medicine (JSM): Enzymology and Protein Science* **2018**, *3*, 1011-1014, Article. DOI: 10.47739/1011.
- (32) Norman, M. A.; Perez, W. L.; Kline, C. C.; Coridan, R. H. Enhanced Photoelectrochemical Energy Conversion in Ultrathin Film Photoanodes with Hierarchically Tailorable Mesoscale Structure. *Advanced Functional Materials* **2018**, *28* (29), Article. DOI: 10.1002/adfm.201800481.
- (33) Ozkizilcik, A.; Sharma, A.; Muresanu, D. F.; Lafuente, J. V.; Tian, Z. R.; Patnaik, R.; Mossler, H.; Sharma, H. S. Timed Release of Cerebrolysin Using Drug-Loaded Titanate Nanospheres Reduces Brain Pathology and Improves Behavioral Functions in Parkinson's Disease. *Molecular Neurobiology* **2018**, *55* (1), 359-369, Article. DOI: 10.1007/s12035-017-0747-4.
- (34) Pal, S.; Koeppen, R. E.; Chattopadhyay, A. Wavelength-Selective Fluorescence of a Model Transmembrane Peptide: Constrained Dynamics of Interfacial Tryptophan Anchors. *Journal of Fluorescence* **2018**, *28* (6), 1317-1323, Article. DOI: 10.1007/s10895-018-2293-5.
- (35) Phillips, S. J.; Stenken, J. A. In Situ Inner Lumen Attachment of Heparin to Poly(ether sulfone) Hollow Fiber Membranes Used for Microdialysis Sampling. *Analytical Chemistry* **2018**, *90* (8), 4955-4960, Article. DOI: 10.1021/acs.analchem.7b03927.
- (36) Pickens, J. B.; Mills, L. G.; Wang, F.; Striegler, S. Evaluating hydrophobic galactonoamidines as transition state analogs for enzymatic beta-galactoside hydrolysis. *Bioorganic Chemistry* **2018**, *77*, 144-151, Article. DOI: 10.1016/j.bioorg.2018.01.012.
- (37) Rath, N. C.; Liyanage, R.; Gupta, A.; Packialakshmi, B.; Lay, J. O., Jr. A method to culture chicken enterocytes and their characterization. *Poultry Science* **2018**, *97* (11), 4040-4047, Article. DOI: 10.3382/ps/pey248.

- (38) Reed, P. J.; Mehrabi, H.; Schichtl, Z. G.; Coridan, R. H. Enhanced Electrochemical Stability of TiO₂-Protected, Al-doped ZnO Transparent Conducting Oxide Synthesized by Atomic Layer Deposition. *ACS Applied Materials & Interfaces* **2018**, *10* (50), 43691-43698, Article. DOI: 10.1021/acsami.8b16531.
- (39) Requejo, C.; Ruiz-Ortega, J. A.; Cepeda, H.; Sharma, A.; Sharma, H. S.; Ozkizilcik, A.; Tian, R.; Moessler, H.; Ugedo, L.; Lafuente, J. V. Nanodelivery of Cerebrolysin and Rearing in Enriched Environment Induce Neuroprotective Effects in a Preclinical Rat Model of Parkinson's Disease. *Molecular Neurobiology* **2018**, *55* (1), 286-299, Article. DOI: 10.1007/s12035-017-0741-x.
- (40) Rivera-Valentin, E. G.; Gough, R. V.; Chevrier, V. F.; Primm, K. M.; Martinez, G. M.; Tolbert, M. Constraining the Potential Liquid Water Environment at Gale Crater, Mars. *Journal of Geophysical Research-Planets* **2018**, *123* (5), 1156-1167, Article. DOI: 10.1002/2018je005558.
- (41) Shahsavari, H. R.; Aghakhanpour, R. B.; Nikravesh, M.; Ozdemir, J.; Haghghi, M. G.; Notash, B.; Beyzavi, M. H. Highly Emissive Cycloplatinated(II) Complexes Obtained by the Chloride Abstraction from the Complex [Pt(ppy)(PPh₃)(Cl)]: Employing Various Silver Salts. *Organometallics* **2018**, *37* (17), 2890-2900, Article. DOI: 10.1021/acs.organomet.8b00461.
- (42) Sharma, A.; Muresanu, D. F.; Lafuente, J. V.; Sjoquist, P. O.; Patnaik, R.; Tian, Z. R.; Ozkizilcik, A.; Sharma, H. S. Cold Environment Exacerbates Brain Pathology and Oxidative Stress Following Traumatic Brain Injuries: Potential Therapeutic Effects of Nanowired Antioxidant Compound H-290/51. *Molecular Neurobiology* **2018**, *55* (1), 276-285, Article. DOI: 10.1007/s12035-017-0740-y.
- (43) Sharma, B.; Pickens, J. B.; Striegler, S.; Barnett, J. D. Biomimetic Glycoside Hydrolysis by a Microgel Templatized with a Competitive Glycosidase Inhibitor. *ACS Catalysis* **2018**, *8* (9), 8788-8795, Article. DOI: 10.1021/acscatal.8b02440.
- (44) Sharma, B.; Striegler, S. Crosslinked Microgels as Platform for Hydrolytic Catalysts. *Biomacromolecules* **2018**, *19* (4), 1164-1174, Article. DOI: 10.1021/acs.biomac.8b00019.
- (45) Sharma, B.; Striegler, S.; Whaley, M. Modulating the Catalytic Performance of an Immobilized Catalyst with Matrix Effects - A Critical Evaluation. *ACS Catalysis* **2018**, *8* (8), 7710-7718, Article. DOI: 10.1021/acscatal.8b01910.
- (46) Sharma, H. S.; Muresanu, D. F.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Ozkizilcik, A.; Castellani, R. J.; Moessler, H.; Sharma, A. Co-Administration of TiO₂ Nanowired Mesenchymal Stem Cells with Cerebrolysin Potentiates Neprilysin Level and Reduces Brain Pathology in Alzheimer's Disease. *Molecular Neurobiology* **2018**, *55* (1), 300-311, Article. DOI: 10.1007/s12035-017-0742-9.
- (47) Song, L.; Liang, Z. X.; Ma, Z.; Zhang, Y.; Chen, J. Y.; Adzic, R. R.; Wang, J. X. Temperature-Dependent Kinetics and Reaction Mechanism of Ammonia Oxidation on Pt, Ir, and PtIr Alloy Catalysts. *Journal of the Electrochemical Society* **2018**, *165* (15), J3095-J3100, Article. DOI: 10.1149/2.0181815jes.
- (48) Tashi, M.; Shafiee, B.; Sakamaki, Y.; Hu, J. Y.; Heidrick, Z.; Khosropour, A. R.; Beyzavi, M. H. Micro-flow nanocatalysis: synergic effect of TfOH@SPIONs and micro-flow technology as an efficient and robust catalytic system for the synthesis of plasticizers. *RSC Advances* **2018**, *8* (66), 37835-37840, Article. DOI: 10.1039/c8ra07838f.

- (49) Usery, R. D.; Enoki, T. A.; Wickramasinghe, S. P.; Nguyen, V. P.; Ackerman, D. G.; Greathouse, D. V.; Koeppe, R. E.; Barrera, F. N.; Feigenson, G. W. Membrane Bending Moduli of Coexisting Liquid Phases Containing Transmembrane Peptide. *Biophysical Journal* **2018**, *114* (9), 2152-2164, Article. DOI: 10.1016/j.bpj.2018.03.026.
- (50) Venkat, S.; Chen, H.; Stahman, A.; Hudson, D.; McGuire, P.; Gan, Q.; Fan, C. Characterizing Lysine Acetylation of Isocitrate Dehydrogenase in Escherichia coli. *Journal of Molecular Biology* **2018**, *430* (13), 1901-1911, Article. DOI: 10.1016/j.jmb.2018.04.031.
- (51) Venkat, S.; Sturges, J.; Stahman, A.; Gregory, C.; Gan, Q.; Fan, C. Genetically Incorporating Two Distinct Post-translational Modifications into One Protein Simultaneously. *ACS Synthetic Biology* **2018**, *7* (2), 689-695, Article. DOI: 10.1021/acssynbio.7b00408.
- (52) Wang, R.; Xu, L. M.; Wang, F. Molecular-scale processes affecting growth rates of ice at moderate supercooling. *Frontiers of Physics* **2018**, *13* (5), Article. DOI: 10.1007/s11467-018-0808-9.
- (53) Wang, Y. X.; Li, Q. Y.; Cartmell, S.; Li, H. D.; Mendoza, S.; Zhang, J. G.; Deng, Z. Q. D.; Xiao, J. Fundamental understanding and rational design of high energy structural microbatteries. *Nano Energy* **2018**, *43*, 310-316, Article. DOI: 10.1016/j.nanoen.2017.11.046.
- (54) White, R. L.; White, C. M.; Turgut, H.; Massoud, A.; Tian, Z. R. Comparative studies on copper adsorption by graphene oxide and functionalized graphene oxide nanoparticles. *Journal of the Taiwan Institute of Chemical Engineers* **2018**, *85*, 18-28, Article. DOI: 10.1016/j.jtice.2018.01.036.
- (55) Wu, B. B.; Wang, S. Y.; Lochala, J.; Desrochers, D.; Liu, B.; Zhang, W. Q.; Yang, J. H.; Xiao, J. The role of the solid electrolyte interphase layer in preventing Li dendrite growth in solid-state batteries. *Energy & Environmental Science* **2018**, *11* (7), 1803-1810, Article. DOI: 10.1039/c8ee00540k.
- (56) Yang, T.; Fang, L.; Sanders, S.; Jayanthi, S.; Rajan, G.; Podicheti, R.; Thallapuram, S. K.; Mockaitis, K.; Medina-Bolivar, F. Stilbenoid prenyltransferases define key steps in the diversification of peanut phytoalexins. *Journal of Biological Chemistry* **2018**, *293* (1), 28-46, Article. DOI: 10.1074/jbc.ra117.000564.
- (57) Yuan, Y.; Li, J.; Li, X.-Z.; Wang, F. The strengths and limitations of effective centroid force models explored by studying isotopic effects in liquid water. *Journal of Chemical Physics* **2018**, *148* (18), Article. DOI: 10.1063/1.5027433.
- (58) Zamani, P.; Ozdemir, J.; Ha, Y. M.; Benamara, M.; Kuchuk, A. V.; Wang, T. J.; Chen, J. Y.; Khosropour, A. R.; Beyzavi, M. H. Magnetic Nanoparticle Anchored Deep Eutectic Solvents as a Catalyst for the Etherification and Amination of Naphthols. *Advanced Synthesis & Catalysis* **2018**, *360* (22), 4372-4380, Article. DOI: 10.1002/adsc.201800743.
- (59) Zhang, M. K.; Peyear, T.; Patmanidis, I.; Greathouse, D. V.; Marrink, S. J.; Andersen, O. S.; Ingolfsson, H. I. Fluorinated Alcohols' Effects on Lipid Bilayer Properties. *Biophysical Journal* **2018**, *115* (4), 679-689, Article. DOI: 10.1016/j.bpj.2018.07.010.
- (60) Zhao, E. Y.; Nie, K. H.; Yu, X. Q.; Hu, Y. S.; Wang, F. W.; Xiao, J.; Li, H.; Huang, X. J. Advanced Characterization Techniques in Promoting Mechanism Understanding for Lithium-Sulfur Batteries. *Advanced Functional Materials* **2018**, *28* (38), Article. DOI: 10.1002/adfm.201707543.

(61) Zong, G.; Sun, X.; Bhakta, R.; Whisenhunt, L.; Hu, Z.; Wang, F.; Shi, W. Q. New insights into structure-activity relationship of ipomoeassin F from its bioisosteric 5-oxa/aza analogues. *European Journal of Medicinal Chemistry* **2018**, *144*, 751-757, Article. DOI: 10.1016/j.ejmech.2017.11.022.

2017 (n=56)

- (1) Beaven, A. H.; Sodt, A. J.; Pastor, R. W.; Koeppe, R. E.; Andersen, O. S.; Im, W. Characterizing Residue-Bilayer Interactions Using Gramicidin A as a Scaffold and Tryptophan Substitutions as Probes. *Journal of Chemical Theory and Computation* **2017**, *13* (10), 5054-5064, Article. DOI: 10.1021/acs.jctc.7b00400.
- (2) Bryson, D. I.; Fan, C.; Guo, L.-T.; Miller, C.; Soll, D.; Liu, D. R. Continuous directed evolution of aminoacyl-tRNA synthetases. *Nature Chemical Biology* **2017**, *13* (12), 1253-1260, Article. DOI: 10.1038/nchembio.2474.
- (3) Cai, Y.; Wang, J.; Zhang, Y.; Li, Z.; Hu, D.; Zheng, N.; Chen, H. Detection of Fleeting Amine Radical Cations and Elucidation of Chain Processes in Visible-Light-Mediated 3+2 Annulation by Online Mass Spectrometric Techniques. *Journal of the American Chemical Society* **2017**, *139* (35), 12259-12266, Article. DOI: 10.1021/jacs.7b06319.
- (4) Choudhury, D.; Lackner, J.; Fleming, R. A.; Goss, J.; Chen, J.; Zou, M. Diamond-like carbon coatings with zirconium-containing interlayers for orthopedic implants. *Journal of the Mechanical Behavior of Biomedical Materials* **2017**, *68*, 51-61, Article. DOI: 10.1016/j.jmbbm.2017.01.023.
- (5) Craig, P.; Chevrier, V.; Sayyed, M. R. G.; Islam, R. Spectral analysis of Deccan intrabasaltic bøle beds: Implications for the formation and alteration of phyllosilicates on Mars. *Planetary and Space Science* **2017**, *135*, 55-63, Article. DOI: 10.1016/j.pss.2016.11.008.
- (6) Crane, C. C.; Wang, F.; Li, J.; Tao, J.; Zhu, Y.; Chen, J. Synthesis of Copper-Silica Core-Shell Nanostructures with Sharp and Stable Localized Surface Plasmon Resonance. *Journal of Physical Chemistry C* **2017**, *121* (10), 5684-5692, Article. DOI: 10.1021/acs.jpcc.6b11891.
- (7) Gan, Q.; Fan, C. Increasing the fidelity of noncanonical amino acid incorporation in cell-free protein synthesis. *Biochimica et Biophysica Acta-General Subjects* **2017**, *1861* (11), 3047-3052, Article. DOI: 10.1016/j.bbagen.2016.12.002.
- (8) Gao, F.; Bajwa, P.; Nguyen, A.; Heyes, C. D. Shell-Dependent Photoluminescence Studies Provide Mechanistic Insights into the Off-Grey-On Transitions of Blinking Quantum Dots. *ACS Nano* **2017**, *11* (3), 2905-2916, Article. DOI: 10.1021/acsnano.6b08040.
- (9) Haque, M. A.; Imamura, R.; Brown, G. A.; Krishnamurthi, V. R.; Niyonshuti, I. I.; Marcelle, T.; Mathurin, L. E.; Chen, J.; Wang, Y. An experiment-based model quantifying antimicrobial activity of silver nanoparticles on *Escherichia coli*. *RSC Advances* **2017**, *7* (89), 56173-56182, Article. DOI: 10.1039/c7ra10495b.
- (10) Head, S. A.; Shi, W. Q.; Yang, E. J.; Nacev, B. A.; Hong, S. Y.; Pasunooti, K. K.; Li, R. J.; Shim, J. S.; Liu, J. O. Simultaneous Targeting of NPC1 and VDAC1 by Itraconazole Leads to Synergistic Inhibition of mTOR Signaling and Angiogenesis. *ACS Chemical Biology* **2017**, *12* (1), 174-182, Article. DOI: 10.1021/acschembio.6b00849.

- (11) Immadisetty, K.; Hettige, J.; Moradi, M. What Can and Cannot Be Learned from Molecular Dynamics Simulations of Bacterial Proton-Coupled Oligopeptide Transporter GkPOT? *Journal of Physical Chemistry B* **2017**, *121* (15), 3644-3656, Article. DOI: 10.1021/acs.jpcb.6b09733.
- (12) Jayanthi, S.; Koppolu, B. P.; Nguyen, K. G.; Smith, S. G.; Felber, B. K.; Kumar, T. K. S.; Zaharoff, D. A. Modulation of Interleukin-12 activity in the presence of heparin. *Scientific Reports* **2017**, *7*, Article. DOI: 10.1038/s41598-017-05382-1.
- (13) Karash, S.; Liyanage, R.; Qassab, A.; Lay, J. O.; Kwon, Y. M. A Comprehensive Assessment of the Genetic Determinants in *Salmonella Typhimurium* for Resistance to Hydrogen Peroxide Using Proteogenomics. *Scientific Reports* **2017**, *7*, Article. DOI: 10.1038/s41598-017-17149-9.
- (14) Lestario, L. N.; Howard, L. R.; Brownmiller, C.; Stebbins, N. B.; Liyanage, R.; Lay, J. O. Changes in polyphenolics during maturation of Java plum (*Syzygium cumini* Lam.). *Food Research International* **2017**, *100*, 385-391, Article. DOI: 10.1016/j.foodres.2017.04.023.
- (15) Li, D.; Yan, X.; Lin, C.; Huang, S.; Tian, Z. R.; He, B.; Yang, Q.; Yu, B.; He, X.; Li, J.; et al. Synthesis of ZnO/Si Hierarchical Nanowire Arrays for Photocatalyst Application. *Nanoscale Research Letters* **2017**, *12* (1), Article. DOI: 10.1186/s11671-016-1803-0.
- (16) Li, J.; Wang, F. Accurate Prediction of the Hydration Free Energies of 20 Salts through Adaptive Force Matching and the Proper Comparison with Experimental References. *Journal of Physical Chemistry B* **2017**, *121* (27), 6637-6645, Article. DOI: 10.1021/acs.jpcb.7b04618.
- (17) Li, J.; Wang, F. Water graphene contact surface investigated by pairwise potentials from force-matching PAW-PBE with dispersion correction. *Journal of Chemical Physics* **2017**, *146* (5), Article. DOI: 10.1063/1.4974921.
- (18) Lochala, J.; Liu, D. Y.; Wu, B. B.; Robinson, C.; Xiao, J. Research Progress toward the Practical Applications of Lithium-Sulfur Batteries. *ACS Applied Materials & Interfaces* **2017**, *9* (29), 24407-24421, Article. DOI: 10.1021/acsami.7b06208.
- (19) Lowe, J. M.; Yan, Q.; Benamara, M.; Coridan, R. H. Direct photolithographic patterning of cuprous oxide thin films via photoelectrodeposition. *Journal of Materials Chemistry A* **2017**, *5* (41), 21765-21772, Article. DOI: 10.1039/c7ta05321e.
- (20) Lu, D. P.; Tao, J. H.; Yan, P. F.; Henderson, W. A.; Li, Q. Y.; Shao, Y. Y.; Helm, M. L.; Borodin, O.; Graff, G. L.; Polzin, B.; et al. Formation of Reversible Solid Electrolyte Interface on Graphite Surface from Concentrated Electrolytes. *Nano Letters* **2017**, *17* (3), 1602-1609, Article. DOI: 10.1021/acs.nanolett.6b04766.
- (21) Lum, K.; Ingolfsson, H. I.; Koeppe, R. E.; Andersen, O. S. Exchange of Gramicidin between Lipid Bilayers: Implications for the Mechanism of Channel Formation. *Biophysical Journal* **2017**, *113* (8), 1757-1767, Article. DOI: 10.1016/j.bpj.2017.08.049.
- (22) Muhoza, D.; Adams, P. D. Two small molecules, ZCL278 and AZA197 show promise in influencing protein interactions involving the ras-related protein cell division cycle 42 [Cdc42] to modulate its oncogenic potential. *Open Journal of Biophysics* **2017**, *7* (3), 71-81, Article. DOI: 10.4236/ojbiphy.2017.73006.

- (23) Ni, Z. G.; Wolinski, K.; Pulay, P. Approximate Force Constants from Uncoupled Self-Consistent Field Perturbation Theory Using Nonhybrid Density Functional Theory. *Journal of Physical Chemistry A* **2017**, *121* (1), 348-356, Article. DOI: 10.1021/acs.jpca.6b10959.
- (24) Orishchin, N.; Crane, C. C.; Brownell, M.; Wang, T.; Jenkins, S.; Zou, M.; Nair, A.; Chen, J. Rapid Deposition of Uniform Polydopamine Coatings on Nanoparticle Surfaces with Controllable Thickness. *Langmuir* **2017**, *33* (24), 6046-6053, Article. DOI: 10.1021/acs.langmuir.7b00671.
- (25) Patrick, M. M.; Grillot, J. M.; Derden, Z. M.; Paul, D. W. Long-term Drifts in Sensitivity Caused by Biofouling of an Amperometric Oxygen Sensor. *Electroanalysis* **2017**, *29* (4), 998-1005, Article. DOI: 10.1002/elan.201600653.
- (26) Pickens, J. B.; Wang, F.; Striegler, S. Picomolar inhibition of beta-galactosidase (bovine liver) attributed to loop closure. *Bioorganic & Medicinal Chemistry* **2017**, *25* (20), 5194-5202, Article. DOI: 10.1016/j.bmc.2017.07.020.
- (27) Ploscariu, N. T.; Herrera, A. I.; Jayanthi, S.; Kumar, T. K. S.; Geisbrecht, B. V.; Prakash, O. Backbone and side-chain H-1, N-15, and C-13 resonance assignments of a novel Staphylococcal inhibitor of myeloperoxidase. *Biomolecular NMR Assignments* **2017**, *11* (2), 285-288, Article. DOI: 10.1007/s12104-017-9764-5.
- (28) Primm, K. M.; Gough, R. V.; Chevrier, V. F.; Tolbert, M. A. Freezing of perchlorate and chloride brines under Mars-relevant conditions. *Geochimica Et Cosmochimica Acta* **2017**, *212*, 211-220, Article. DOI: 10.1016/j.gca.2017.06.012.
- (29) Pulay, P. ACS Award in Theoretical Chemistry. *Chemical and Engineering News* **2017**, *95* (1), 47, Article.
- (30) Rajagopalan, V.; Greathouse, D. V.; Koeppe, R. E. Influence of glutamic acid residues and pH on the properties of transmembrane helices. *Biochimica et Biophysica Acta-Biomembranes* **2017**, *1859* (3), 484-492, Article. DOI: 10.1016/j.bbamem.2017.01.006.
- (31) Rath, N. C.; Liyanage, R.; Makkar, S. K.; Lay, J. O. Protein profiles of hatchery egg shell membrane. *Proteome Science* **2017**, *15*, Article. DOI: 10.1186/s12953-017-0112-6.
- (32) Rayaprolu, S. J.; Hettiarachchy, N. S.; Horax, R.; Kumar-Phillips, G.; Liyanage, R.; Lay, J.; Chen, P. Purification and characterization of a peptide from soybean with cancer cell proliferation inhibition. *Journal of Food Biochemistry* **2017**, *41* (4), Article. DOI: 10.1111/jfbc.12374.
- (33) Rogers, T. R.; Wang, F. Performing the Millikan experiment at the molecular scale: Determination of atomic Millikan-Thomson charges by computationally measuring atomic forces. *Journal of Chemical Physics* **2017**, *147* (16), Article. DOI: 10.1063/1.5001254.
- (34) Schafer, L.; Ischenko, A. A.; Zhabanov, Y. A.; Otyotov, A. A.; Girichev, G. V. Photodissociation dynamics of spatially aligned molecules by time-resolved electron diffraction. *Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimicheskaya Tekhnologiya* **2017**, *60* (3), 4-14, Article. DOI: 10.6060/tcct.2017603.5551.
- (35) Schafer, L.; Tarasov, Y. I.; Koshelev, A. V.; Ischenko, A. A. Ultrafast electron crystallography and nanocrystallography: for chemistry, biology and materials science. Part I. Ultrafast electron crystallography.

Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimicheskaya Tekhnologiya **2017**, 60 (5), 4-20, Article. DOI: 10.6060/tcct.2017605.5608.

- (36) Schafer, L.; Tarasov, Y. I.; Sharonova, N. V.; Ischenko, A. A. Ultrafast electron crystallography and nanocrystallography: for chemistry, biology and materials science. Part II. ultrafast electron nanocrystallography. *Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimicheskaya Tekhnologiya* **2017**, 60 (6), 4-27, Article. DOI: 10.6060/tcct.2017606.5609.
- (37) Shrestha, M. L.; Qi, W.; McIntosh, M. C. Acyclic 1,4-Stereocontrol via the Allylic Diazene Rearrangement: Development, Applications, and the Essential Role of Kinetic E Stereoselectivity in Tosylhydrazone Formation. *Journal of Organic Chemistry* **2017**, 82 (16), 8359-8370, Article. DOI: 10.1021/acs.joc.7b00428.
- (38) Singh, G.; Singh, S.; Wagner, A.; Chevrier, V. F.; Combe, J. P.; Gainor, M. Experimental reflectance study of methane and ethane ice at Titan's surface conditions. *Astrophysics and Space Science* **2017**, 362 (10), Article. DOI: 10.1007/s10509-017-3166-0.
- (39) Singh, S.; Combe, J. P.; Cordier, D.; Wagner, A.; Chevrier, V. F.; McMahon, Z. Experimental determination of acetylene and ethylene solubility in liquid methane and ethane: Implications to Titan's surface. *Geochimica Et Cosmochimica Acta* **2017**, 208, 86-101, Article. DOI: 10.1016/j.gca.2017.03.007.
- (40) Singharoy, A.; Chipot, C.; Moradi, M.; Schulten, K. Chemomechanical Coupling in Hexameric Protein-Protein Interfaces Harnesses Energy within V-Type ATPases. *Journal of the American Chemical Society* **2017**, 139 (1), 293-310, Article. DOI: 10.1021/jacs.6b10744.
- (41) Tao, J.; Chen, J.; Li, J.; Mathurin, L.; Zheng, J.-C.; Li, Y.; Lu, D.; Cao, Y.; Wu, L.; Cava, R. J.; et al. Reversible structure manipulation by tuning carrier concentration in metastable Cu₂S. *Proceedings of the National Academy of Sciences of the United States of America* **2017**, 114 (37), 9832-9837, Article. DOI: 10.1073/pnas.1709163114.
- (42) Tian, Z. A Novel Method for Nano-Polishing TEM Samples Out of a Ni-Ti Endodontic File. *Journal Material Science* **2017**, 2 (1), Article. DOI: 10.19080/jojms.2017.02.555576.
- (43) Turgut, H.; Tian, Z. R.; Yu, F.; Zhou, W. Multivalent Cation Cross-Linking Suppresses Highly Energetic Graphene Oxide's Flammability. *Journal of Physical Chemistry C* **2017**, 121 (10), 5829-5835, Article. DOI: 10.1021/acs.jpcc.6b13043.
- (44) Vasan, R.; Gao, F.; Manasreh, M. O.; Heyes, C. D. Investigation of charge transport between nickel oxide nanoparticles and CdSe/ZnS alloyed nanocrystals. *MRS Advances* **2017**, 2 (51), 2935-2941, Article. DOI: 10.1557/adv.2017.488.
- (45) Vasicek, T. W.; Jenkins, S. V.; Vaz, L.; Chen, J.; Stenken, J. A. Thermoresponsive nanoparticle agglomeration/aggregation in salt solutions: Dependence on graft density. *Journal of Colloid and Interface Science* **2017**, 506, 338-345, Article. DOI: 10.1016/j.jcis.2017.07.044.
- (46) Venkat, S.; Gregory, C.; Meng, K. X.; Gan, Q. L.; Fan, C. G. A Facile Protocol to Generate Site-Specifically Acetylated Proteins in Escherichia Coli. *JOVE-Journal of Visualized Experiments* **2017**, (130), Article. DOI: 10.3791/57061.

- (47) Venkat, S.; Gregory, C.; Sturges, J.; Gan, Q.; Fan, C. Studying the Lysine Acetylation of Malate Dehydrogenase. *Journal of Molecular Biology* **2017**, 429 (9), 1396-1405, Article. DOI: 10.1016/j.jmb.2017.03.027.
- (48) Venkat, S.; Nannapaneni, D. T.; Gregory, C.; Gan, Q.; McIntosh, M.; Fan, C. Genetically encoding thioacetyl-lysine as a non-deacetylatable analog of lysine acetylation in Escherichia coli. *FEBS Open Bio* **2017**, 7 (11), 1805-1814, Article. DOI: 10.1002/2211-5463.12320.
- (49) Wang, J.; Mao, C.; Feng, P.; Zheng, N. Visible-Light-Mediated 4+2 Annulation of N-Cyclobutylanilines with Alkynes Catalyzed by Self-Doped Ti³⁺@TiO₂. *Chemistry-a European Journal* **2017**, 23 (61), 15396-15403, Article. DOI: 10.1002/chem.201701587.
- (50) Wang, Q.; Zheng, N. A Photocatalyzed Synthesis of Naphthalenes by Using Aniline as a Traceless Directing Group in 4+2 Annulation of Amino-benzocyclobutenes with Alkynes. *ACS Catalysis* **2017**, 7 (6), 4197-4201, Article. DOI: 10.1021/acscatal.7b00716.
- (51) Wu, B. B.; Lochala, J.; Taverne, T.; Xiao, J. The interplay between solid electrolyte interface (SEI) and dendritic lithium growth. *Nano Energy* **2017**, 40, 34-41, Article. DOI: 10.1016/j.nanoen.2017.08.005.
- (52) Xia, J.; Tian, Z. R.; Hua, L.; Chen, L.; Zhou, Z.; Qian, L.; Ungar, P. S. Enamel crystallite strength and wear: nanoscale responses of teeth to chewing loads. *Journal of the Royal Society Interface* **2017**, 14 (135), Article. DOI: 10.1098/rsif.2017.0456.
- (53) Yang, Z.; Song, J.; Dai, Y.; Chen, J.; Wang, F.; Lin, L.; Liu, Y.; Zhang, F.; Yu, G.; Zhou, Z.; et al. Self-Assembly of Semiconducting-Plasmonic Gold Nanoparticles with Enhanced Optical Property for Photoacoustic Imaging and Photothermal Therapy. *Theranostics* **2017**, 7 (8), 2177-2185, Article. DOI: 10.7150/thno.20545.
- (54) Yuan, D. D.; Li, Y. Z.; Ni, Z. G.; Pulay, P.; Li, W.; Li, S. H. Benchmark Relative Energies for Large Water Clusters with the Generalized Energy-Based Fragmentation Method. *Journal of Chemical Theory and Computation* **2017**, 13 (6), 2696-2704, Article. DOI: 10.1021/acs.jctc.7b00284.
- (55) Zong, G. H.; Hirsch, M.; Mondrik, C.; Hu, Z. J.; Shi, W. Q. Design, synthesis and biological evaluation of fucose-truncated monosaccharide analogues of ipomoeassin F. *Bioorganic & Medicinal Chemistry Letters* **2017**, 27 (12), 2752-2756, Article. DOI: 10.1016/j.bmcl.2017.04.065.
- (56) Zong, G. H.; Whisenhunt, L.; Hu, Z. J.; Shi, W. Q. Synergistic Contribution of Tiglate and Cinnamate to Cytotoxicity of Ipomoeassin F. *Journal of Organic Chemistry* **2017**, 82 (9), 4977-4985, Article. DOI: 10.1021/acs.joc.7b00409.

2016 (n=60)

- (1) Alwarsh, S.; Xu, Y.; Qian, S. Y.; McIntosh, M. C. Radical [1,3] Rearrangements of Breslow Intermediates. *Angewandte Chemie-International Edition* **2016**, 55 (1), 355-358, Article. DOI: 10.1002/anie.201508368.

- (2) Bajwa, P.; Gao, F.; Nguyen, A.; Omogo, B.; Heyes, C. D. Influence of the Inner-Shell Architecture on Quantum Yield and Blinking Dynamics in Core/Multishell Quantum Dots. *ChemPhysChem* **2016**, *17* (5), 731-740, Article. DOI: 10.1002/cphc.201500868.
- (3) Beckford, S.; Mathurin, L.; Chen, J.; Fleming, R. A.; Zou, M. The effects of polydopamine coated Cu nanoparticles on the tribological properties of polydopamine/PTFE coatings. *Tribology International* **2016**, *103*, 87-94, Article. DOI: 10.1016/j.triboint.2016.06.031.
- (4) Borowski, P.; Gac, W.; Pulay, P.; Wolinski, K. The vibrational spectrum of 1,4-dioxane in aqueous solution - theory and experiment. *New Journal of Chemistry* **2016**, *40* (9), 7663-7670, Article. DOI: 10.1039/c6nj01198e.
- (5) Chintapalli, S. V.; Jayanthi, S.; Mallipeddi, P. L.; Gundampati, R.; Kumar, T. K. S.; van Rossum, D. B.; Anishkin, A.; Adams, S. H. Novel Molecular Interactions of Acylcarnitines and Fatty Acids with Myoglobin. *Journal of Biological Chemistry* **2016**, *291* (48), 251133-251143, Article. DOI: 10.1074/jbc.m116.754978.
- (6) Coridan, R. H.; Schichtl, Z. G.; Sun, T.; Fezzaa, K. Inhibition of Tafel Kinetics for Electrolytic Hydrogen Evolution on Isolated Micron Scale Electrocatalysts on Semiconductor Interfaces. *ACS Applied Materials & Interfaces* **2016**, *8* (37), 24612-24620, Article. DOI: 10.1021/acsami.6b07729.
- (7) Dehouck, E.; Gaudin, A.; Chevrier, V.; Mangold, N. Mineralogical record of the redox conditions on early Mars. *Icarus* **2016**, *271*, 67-75, Article. DOI: 10.1016/j.icarus.2016.01.030.
- (8) Fakharzadeh, A.; Moradi, M. Effective Riemannian Diffusion Model for Conformational Dynamics of Biomolecular Systems. *Journal of Physical Chemistry Letters* **2016**, *7* (24), 4980-4987, Article. DOI: 10.1021/acs.jpclett.6b02208.
- (9) Fan, C.; Ip, K.; Soell, D. Expanding the genetic code of Escherichia coli with phosphotyrosine. *FEBS Letters* **2016**, *590* (17), 3040-3047, Article. DOI: 10.1002/1873-3468.12333.
- (10) Fan, Q.-H.; Pickens, J. B.; Striegler, S.; Gervaise, C. D. Illuminating the binding interactions of galactonoamidines during the inhibition of beta-galactosidase (E-coli). *Bioorganic & Medicinal Chemistry* **2016**, *24* (4), 661-671, Article. DOI: 10.1016/j.bmc.2015.12.034.
- (11) Fruchtl, M.; Sakon, J.; Beitle, R. Alternate carbohydrate and nontraditional inducer leads to increased productivity of a collagen binding domain fusion protein via fed-batch fermentation. *Journal of Biotechnology* **2016**, *226*, 65-73, Article. DOI: 10.1016/j.jbiotec.2016.03.016.
- (12) Gan, Q.; Lehman, B. P.; Bobik, T. A.; Fan, C. Expanding the genetic code of Salmonella with non-canonical amino acids. *Scientific Reports* **2016**, *6*, Article. DOI: 10.1038/srep39920.
- (13) Gough, R. V.; Chevrier, V. F.; Tolbert, M. A. Formation of liquid water at low temperatures via the deliquescence of calcium chloride: Implications for Antarctica and Mars. *Planetary and Space Science* **2016**, *131*, 79-87, Article. DOI: 10.1016/j.pss.2016.07.006.
- (14) Henderson, R. C.; Gao, F.; Jayanthi, S.; Kight, A.; Sharma, P.; Goforth, R. L.; Heyes, C. D.; Henry, R. L.; Kumar, T. K. S. Domain Organization in the 54-kDa Subunit of the Chloroplast Signal Recognition Particle. *Biophysical Journal* **2016**, *111* (6), 1151-1162, Article. DOI: 10.1016/j.bpj.2016.08.004.

- (15) Hu, M.; Fritsch, I. Application of Electrochemical Redox Cycling: Toward Differentiation of Dopamine and Norepinephrine. *Analytical Chemistry* **2016**, *88* (11), 5574-5578, Article. DOI: 10.1021/acs.analchem.6b00427.
- (16) Jenkins, S. V.; Srivatsan, A.; Reynolds, K. Y.; Gao, F.; Zhang, Y.; Heyes, C. D.; Pandey, R. K.; Chen, J. Understanding the interactions between porphyrin-containing photosensitizers and polymer-coated nanoparticles in model biological environments. *Journal of Colloid and Interface Science* **2016**, *461*, 225-231, Article. DOI: 10.1016/j.jcis.2015.09.037.
- (17) Kotagiri, N.; Sakon, J.; Han, H.; Zharov, V. P.; Kim, J.-W. Fluorescent ampicillin analogues as multifunctional disguising agents against opsonization. *Nanoscale* **2016**, *8* (25), 12658-12667, Article. DOI: 10.1039/c5nr08686h.
- (18) Kwizera, E. A.; Chaffin, E.; Shen, X.; Chen, J.; Zou, Q.; Wu, Z.; Gai, Z.; Bhana, S.; O'Connor, R.; Wang, L.; et al. Size- and Shape-Controlled Synthesis and Properties of Magnetic-Plasmonic Core-Shell Nanoparticles. *Journal of Physical Chemistry C* **2016**, *120* (19), 10530-10546, Article. DOI: 10.1021/acs.jpcc.6b00875.
- (19) Li, J.; Wang, F. The Effect of Core Correlation on the MP2 Hydration Free Energies of Li⁺, Na⁺, and K⁺. *Journal of Physical Chemistry B* **2016**, *120* (34), 9088-9096, Article. DOI: 10.1021/acs.jpcb.6b06102.
- (20) Li, J.; Wang, F. The effects of replacing the water model while decoupling water-water and water-solute interactions on computed properties of simple salts. *Journal of Chemical Physics* **2016**, *145* (4), Article. DOI: 10.1063/1.4958955.
- (21) Manobaran, A.; Tian, Z. R.; Ang, S. S. MoS₂/Reduced Graphene Oxide-Based 2D Nanocomposites for Boosting the Energy Density of Electric Double-Layer Capacitor. *MRS Advances* **2016**, *1* (22), 1619-1624, Article. DOI: 10.1557/adv.2016.140.
- (22) Marquardt, D.; Heberle, F. A.; Greathouse, D. V.; Koeppe, R. E.; Standaert, R. F.; Van Oosten, B. J.; Harroun, T. A.; Kinnun, J. J.; Williams, J. A.; Wassall, S. R.; et al. Lipid bilayer thickness determines cholesterol's location in model membranes. *Soft Matter* **2016**, *12* (47), 9417-9428, Article. DOI: 10.1039/c6sm01777k.
- (23) Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Ionization Properties of Histidine Residues in the Lipid Bilayer Membrane Environment. *Journal of Biological Chemistry* **2016**, *291* (36), 19146-19156, Article. DOI: 10.1074/jbc.m116.738583.
- (24) Masse, M.; Conway, S. J.; Gargani, J.; Patel, M. R.; Pasquon, K.; McEwen, A.; Carpy, S.; Chevrier, V.; Balme, M. R.; Ojha, L.; et al. Transport processes induced by metastable boiling water under Martian surface conditions. *Nature Geoscience* **2016**, *9* (6), 425-428, Article. DOI: 10.1038/ngeo2706.
- (25) Meeker, D. G.; Jenkins, S. V.; Miller, E. K.; Beenken, K. E.; Loughran, A. J.; Powless, A.; Muldoon, T. J.; Galanzha, E. I.; Zharov, V. P.; Smeltzer, M. S.; et al. Synergistic Photothermal and Antibiotic Killing of Biofilm-Associated *Staphylococcus aureus* Using Targeted Antibiotic-Loaded Gold Nanoconstructs. *ACS Infectious Diseases* **2016**, *2* (4), 241-250, Article. DOI: 10.1021/acsinfecdis.5b00117.
- (26) Moldenhauer, J.; Meier, M.; Paul, D. W. Rapid and Direct Determination of Diffusion Coefficients Using Microelectrode Arrays. *Journal of the Electrochemical Society* **2016**, *163* (8), H672-H678, Article. DOI: 10.1149/2.0561608jes.

- (27) Morris, J.; Jayanthi, S.; Langston, R.; Daily, A.; Kight, A.; McNabb, D. S.; Henry, R.; Kumar, T. K. S. Heparin-binding peptide as a novel affinity tag for purification of recombinant proteins. *Protein Expression and Purification* **2016**, *126*, 93-103, Article. DOI: 10.1016/j.pep.2016.05.013.
- (28) Morris, K. M.; Henderson, R.; Suresh Kumar, T. K.; Heyes, C. D.; Adams, P. D. Intrinsic GTP hydrolysis is observed for a switch 1 variant of Cdc42 in the presence of a specific GTPase inhibitor. *Small GTPases* **2016**, *7* (1), 1-11, Article. DOI: 10.1080/21541248.2015.1123797.
- (29) Mortazavi, A.; Rajagopalan, V.; Sparks, K. A.; Greathouse, D. V.; Koeppe, R. E. Juxta-terminal Helix Unwinding as a Stabilizing Factor to Modulate the Dynamics of Transmembrane Helices. *ChemBioChem* **2016**, *17* (6), 462-465, Article. DOI: 10.1002/cbic.201500656.
- (30) Mortazavi, A.; Rajagopalan, V.; Sparks, K. A.; Greathouse, D. V.; Koeppe II, R. E. Cover Picture: Juxta-terminal Helix Unwinding as a Stabilizing Factor to Modulate the Dynamics of Transmembrane Helices (ChemBioChem 6/2016). *ChemBioChem* **2016**, *17* (6), 441-441, Article. DOI: 10.1002/cbic.201600113.
- (31) Mukherjee, R. P.; Beitle, R.; Jayanthi, S.; Kumar, T. K. S.; McNabb, D. S. Production of an anti-Candida peptide via fed batch and ion exchange chromatography. *Biotechnology Progress* **2016**, *32* (4), 865-871, Article. DOI: 10.1002/btpr.2296.
- (32) Nash, C. K.; Fritsch, I. Poly(3,4-ethylenedioxythiophene)-Modified Electrodes for Microfluidics Pumping with Redox-Magnetohydrodynamics: Improving Compatibility for Broader Applications by Eliminating Addition of Redox Species to Solution. *Analytical Chemistry* **2016**, *88* (3), 1601-1609, Article. DOI: 10.1021/acs.analchem.5b03182.
- (33) Nguyen, Q.; Hettiarachchy, N.; Rayaprolu, S.; Seo, H. S.; Horax, R.; Chen, P. Y.; Kumar, T. K. S. Protein-rich beverage developed using non-GM soybean (R08-4004) and evaluated for sensory acceptance and shelf-life. *Journal of Food Science and Technology-Mysore* **2016**, *53* (8), 3271-3281, Article. DOI: 10.1007/s13197-016-2302-0.
- (34) Nguyen, Q.; Hettiarachchy, N.; Rayaprolu, S.; Jayanthi, S.; Thallapuram, S.; Chen, P. Physicochemical Properties and ACE-I Inhibitory Activity of Protein Hydrolysates from a Non-Genetically Modified Soy Cultivar. *Journal of the American Oil Chemists Society* **2016**, *93* (4), 595-606, Article. DOI: 10.1007/s11746-016-2801-1.
- (35) Omogo, B.; Gao, F.; Bajwa, P.; Kaneko, M.; Heyes, C. D. Reducing Blinking in Small Core-Multishell Quantum Dots by Carefully Balancing Confinement Potential and Induced Lattice Strain: The "Goldilocks" Effect. *ACS Nano* **2016**, *10* (4), 4072-4082, Article. DOI: 10.1021/acsnano.5b06994.
- (36) Packialakshmi, B.; Liyanage, R.; Lay, J. O., Jr.; Okimoto, R.; Rath, N. C. Proteomic Changes in the Plasma of Broiler Chickens with Femoral Head Necrosis. *Biomarker Insights* **2016**, *11*, 55-62, Article. DOI: 10.4137/bmi.s38291.
- (37) Packialakshmi, B.; Liyanage, R.; Lay, J. O., Jr; Makkar, S. K.; Rath, N. C. Proteomic Changes in Chicken Plasma Induced by *Salmonella typhimurium* Lipopolysaccharides. *Proteomics Insights* **2016**, *7*, Article. DOI: 10.4137/pri.s31609 From PubMed.

- (38) Pickens, J. B.; Striegler, S.; Fan, Q.-H. Arabinoamidine synthesis and its inhibition toward beta-glucosidase (sweet almonds) in comparison to a library of galactonoamidines. *Bioorganic & Medicinal Chemistry* **2016**, *24* (16), 3371-3377, Article. DOI: 10.1016/j.bmc.2016.04.069.
- (39) Prudovsky, I.; Kacer, D.; Davis, J.; Shah, V.; Jayanthi, S.; Huber, I.; Dakshinamurthy, R.; Ganter, O.; Soldi, R.; Neivandt, D.; et al. Folding of Fibroblast Growth Factor 1 Is Critical for Its Nonclassical Release. *Biochemistry* **2016**, *55* (7), 1159-1167, Article. DOI: 10.1021/acs.biochem.5b01341.
- (40) Pulay, P. ACS Award in Theoretical Chemistry. *Chemical and Engineering News* **2016**, *94* (33), 57, Article.
- (41) Rogers, T. R.; Leong, K.-Y.; Wang, F. Possible Evidence for a New Form of Liquid Buried in the Surface Tension of Supercooled Water. *Scientific Reports* **2016**, *6*, Article. DOI: 10.1038/srep33284.
- (42) Sahore, V.; Kreidermacher, A.; Khan, F. Z.; Fritsch, I. Visualization and Measurement of Natural Convection from Electrochemically-Generated Density Gradients at Concentric Microdisk and Ring Electrodes in a Microfluidic System. *Journal of the Electrochemical Society* **2016**, *163* (4), H3135-H3144, Article. DOI: 10.1149/2.0181604jes.
- (43) Schafer, L.; Ischenko, A. A.; Zhabanov, Y. A.; Otlyotov, A. A.; Girichev, G. V. Photodissociation dynamics of randomly oriented molecular ensembles by time-resolved electron diffraction. *Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimicheskaya Tekhnologiya* **2016**, *59* (12), 22-31, Article. DOI: 10.6060/tcct.20165912.5514.
- (44) Shim, J. S.; Li, R. J.; Bumpus, N. N.; Head, S. A.; Pasunooti, K. K.; Yang, E. J.; Lv, J. F.; Shi, W.; Liu, J. O. Divergence of Antiangiogenic Activity and Hepatotoxicity of Different Stereoisomers of Itraconazole. *Clinical Cancer Research* **2016**, *22* (11), 2709-2720, Article. DOI: 10.1158/1078-0432.ccr-15-1888.
- (45) Shinn, S. E.; Liyanage, R.; Lay, J. O., Jr.; Proctor, A. Isolation and Characterization of Chicken Yolk Vitelline Membrane Lipids Using Eggs Enriched With Conjugated Linoleic Acid. *Lipids* **2016**, *51* (6), 769-779, Article. DOI: 10.1007/s11745-016-4153-x.
- (46) Singh, S.; Cornet, T.; Chevrier, V. F.; Combe, J. P.; McCord, T. B.; Roe, L. A.; Le Mouelic, S.; Le Menn, E.; Wasik, F. C. Near-infrared spectra of liquid/solid acetylene under Titan relevant conditions and implications for Cassini/VIMS detections. *Icarus* **2016**, *270*, 429-434, Article. DOI: 10.1016/j.icarus.2015.11.002.
- (47) Singh, S.; McCord, T. B.; Combe, J. P.; Rodriguez, S.; Cornet, T.; Le Mouelic, S.; Clark, R. N.; Maltagliati, L.; Chevrier, V. F. Acetylene on Titan's Surface. *Astrophysical Journal* **2016**, *828* (1), Article. DOI: 10.3847/0004-637x/828/1/55.
- (48) Song, J.; Wang, F.; Yang, X.; Ning, B.; Harp, M. G.; Culp, S. H.; Hu, S.; Huang, P.; Nie, L.; Chen, J.; et al. Gold Nanoparticle Coated Carbon Nanotube Ring with Enhanced Raman Scattering and Photothermal Conversion Property for Theranostic Applications. *Journal of the American Chemical Society* **2016**, *138* (22), 7005-7015, Article. DOI: 10.1021/jacs.5b13475.
- (49) Stebbins, N. B.; Howard, L. R.; Prior, R. L.; Brownmiller, C.; Liyanage, R.; Lay, J. O.; Yang, X.; Qian, S. Y. Ascorbic acid-catalyzed degradation of cyanidin-3-O-beta-glucoside: Proposed mechanism and identification of a novel hydroxylated product. *Journal of Berry Research* **2016**, *6* (2), 175-187, Article. DOI: 10.3233/jbr-160132.

- (50) Striegler, S.; Fan, Q.-H.; Rath, N. P. Binuclear copper(II) complexes discriminating epimeric glycosides and alpha- and beta-glycosidic bonds in aqueous solution. *Journal of Catalysis* **2016**, *338*, 349-364, Article. DOI: 10.1016/j.jcat.2015.12.026.
- (51) Striegler, S.; Pickens, J. B. Discrimination of chiral copper(II) complexes upon binding of galactonoamidine ligands. *Dalton Transactions* **2016**, *45* (38), 15203-15210, Article. DOI: 10.1039/c6dt02153k.
- (52) Suarez, C. A.; Flaig, P. P.; Ludvigson, G. A.; Gonzalez, L. A.; Tian, R.; Zhou, H. J.; McCarthy, P. J.; Van der Kolk, D. A.; Fiorillo, A. R. Reconstructing the paleohydrology of a cretaceous Alaskan paleopolar coastal plain from stable isotopes of bivalves. *Palaeogeography Palaeoclimatology Palaeoecology* **2016**, *441*, 339-351, Article. DOI: 10.1016/j.palaeo.2015.07.025.
- (53) Thibado, J. K.; Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Influence of High pH and Cholesterol on Single Arginine-Containing Transmembrane Peptide Helices. *Biochemistry* **2016**, *55* (45), 6337-6343, Article. DOI: 10.1021/acs.biochem.6b00896.
- (54) Toth, Z.; Pulay, P. Finding symmetry breaking Hartree-Fock solutions: The case of triplet instability. *Journal of Chemical Physics* **2016**, *145* (16), Article. DOI: 10.1063/1.4964903.
- (55) Wang, J.; Nguyen, T. H.; Zheng, N. Photoredox-catalyzed 4+2 annulation of cyclobutylanilines with alkenes, alkynes, and diarynes in continuous flow. *Science China-Chemistry* **2016**, *59* (2), 180-183, Article. DOI: 10.1007/s11426-015-5547-y.
- (56) Xia, J. X.; Ambrozik, S.; Crane, C. C.; Chen, J. Y.; Dimitrov, N. Impact of Structure and Composition on the Dealloying of CuAu(1-x) Bulk and Nanoscale Alloys. *Journal of Physical Chemistry C* **2016**, *120* (4), 2299-2308, Article. DOI: 10.1021/acs.jpcc.5b11637.
- (57) Xiong, H.; Reynolds, N. M.; Fan, C.; Englert, M.; Hoyer, D.; Miller, S. J.; Söll, D. Dual Genetic Encoding of Acetyl-lysine and Non-deacetylatable Thioacetyl-lysine Mediated by Flexizyme. *Angewandte Chemie-International Edition* **2016**, *55* (12), 4083-4086, Article. DOI: 10.1002/anie.201511750.
- (58) Zent, A. P.; Hecht, M. H.; Hudson, T. L.; Wood, S. E.; Chevrier, V. F. A revised calibration function and results for the Phoenix mission TECP relative humidity sensor. *Journal of Geophysical Research-Planets* **2016**, *121* (4), 626-651, Article. DOI: 10.1002/2015je004933.
- (59) Zhou, H. J.; Tian, Z. R.; Ang, S. S. Improving the cycling stability of Na₃V₂(PO₄)₃ nanoparticle in aqueous sodium ion batteries by introducing carbon support. *Materials for Renewable and Sustainable Energy* **2016**, *5* (1), 9, Article. DOI: 10.1007/s40243-016-0067-z.
- (60) Zong, G. H.; Aljewari, H.; Hu, Z. J.; Shi, W. Q. Revealing the Pharmacophore of Ipomoeassin F through Molecular Editing. *Organic Letters* **2016**, *18* (7), 1674-1677, Article. DOI: 10.1021/acs.orglett.6b00555.

2015 (n=44)

- (1) Arijaje, E. O.; Jayanthi, S.; Kumar, T. K. S.; Wang, Y.-J. Linear starch and hexanoic acid complexation evaluated by isothermal titration calorimetry. *Starch-Starke* **2015**, *67* (9-10), 729-736, Article. DOI: 10.1002/star.201500030.
- (2) Bauer, R.; Janowska, K.; Taylor, K.; Jordan, B.; Gann, S.; Janowski, T.; Latimer, E. C.; Matsushita, O.; Sakon, J. Structures of three polycystic kidney disease-like domains from Clostridium histolyticum collagenases ColG and ColH. *Acta Crystallographica Section D-Structural Biology* **2015**, *71*, 565-577, Article. DOI: 10.1107/s1399004714027722.
- (3) Beck, P.; Pommerol, A.; Zanda, B.; Remusat, L.; Lorand, J. P.; Gopel, C.; Hewins, R.; Pont, S.; Lewin, E.; Quirico, E.; et al. A Noachian source region for the "Black Beauty" meteorite, and a source lithology for Mars surface hydrated dust? *Earth and Planetary Science Letters* **2015**, *427*, 104-111, Article. DOI: 10.1016/j.epsl.2015.06.033.
- (4) Beckford, S.; Mathurin, L.; Chen, J.; Zou, M. The Influence of Cu Nanoparticles on the Tribological Properties of Polydopamine/PTFE plus Cu Films. *Tribology Letters* **2015**, *59* (1), 9, Article. DOI: 10.1007/s11249-015-0543-0.
- (5) Bunnell, K.; Lau, C.-S.; Lay, J. O., Jr.; Gidden, J.; Carrier, D. J. Production and Fractionation of Xylose Oligomers from Switchgrass Hemicelluloses Using Centrifugal Partition Chromatography. *Journal of Liquid Chromatography & Related Technologies* **2015**, *38* (7), 801-809, Article. DOI: 10.1080/10826076.2014.973505.
- (6) Chandrashekhar, R.; Adams, P. D. NMR Spectroscopy Provides a Novel Bioanalytical and Biophysical Approach towards the Characterization of Protein Interactions Involved in the Integration of RAS Signaling. *Journal of Analytical & Bioanalytical Techniques* **2015**, *6*, E122, Article. DOI: 10.4172/2155-9872.1000e122.
- (7) Chen, H.; Golder, M. R.; Wang, F.; Doorn, S. K.; Jasti, R.; Tretiak, S.; Swan, A. K. Raman-Active Modes of Even-Numbered Cycloparaphenylenes: Comparisons between Experiments and Density Functional Theory (DFT) Calculations with Group Theory Arguments. *Journal of Physical Chemistry C* **2015**, *119* (5), 2879-2887, Article. DOI: 10.1021/jp5117195.
- (8) Elsenousy, A.; Hanley, J.; Chevrier, V. F. Effect of evaporation and freezing on the salt paragenesis and habitability of brines at the Phoenix landing site. *Earth and Planetary Science Letters* **2015**, *421*, 39-46, Article. DOI: 10.1016/j.epsl.2015.03.047.
- (9) Forrest, W. P.; Choudhuri, M. M. R.; Kilyanek, S. M.; Natoli, S. N.; Prentice, B. M.; Fanwick, P. E.; Crutchley, R. J.; Ren, T. Synthesis and Electronic Structure of Ru-2(Xap)(4)(Y-gem-DEE) Type Compounds: Effect of Cross-Conjugation. *Inorganic Chemistry* **2015**, *54* (15), 7645-7652, Article. DOI: 10.1021/acs.inorgchem.5b01315.
- (10) Frank, P.; Siebenhofer, B.; Hanzer, T.; Geiss, A. F.; Schadauer, F.; Reiner-Rozman, C.; Durham, B.; Loew, L. M.; Ludwig, B.; Richter, O. M. H.; et al. Proteo-lipobeads for the oriented encapsulation of membrane proteins. *Soft Matter* **2015**, *11* (15), 2906-2908, Article. DOI: 10.1039/c4sm02646b.

- (11) Fruchtl, M.; Sakon, J.; Beitle, R. Expression of a Collagen-Binding Domain Fusion Protein: Effect of Amino Acid Supplementation, Inducer Type, and Culture Conditions. *Biotechnology Progress* **2015**, *31* (2), 503-509, Article. DOI: 10.1002/btpr.2048.
- (12) Gao, F.; Kight, A. D.; Henderson, R.; Jayanthi, S.; Patel, P.; Murchison, M.; Sharma, P.; Goforth, R. L.; Kumar, T. K. S.; Henry, R. L.; et al. Regulation of Structural Dynamics within a Signal Recognition Particle Promotes Binding of Protein Targeting Substrates. *Journal of Biological Chemistry* **2015**, *290* (25), 15462-15474, Article. DOI: 10.1074/jbc.m114.624346.
- (13) Hanley, J.; Chevrier, V. F.; Barrows, R. S.; Swaffer, C.; Altheide, T. S. Near- and mid-infrared reflectance spectra of hydrated oxychlorine salts with implications for Mars. *Journal of Geophysical Research-Planets* **2015**, *120* (8), 1415-1426, Article. DOI: 10.1002/2013je004575.
- (14) Head, S. A.; Shi, W.; Zhao, L.; Gorshkov, K.; Pasunooti, K.; Chen, Y.; Deng, Z. Y.; Li, R. J.; Shim, J. S.; Tang, W. Z.; et al. Antifungal drug itraconazole targets VDAC1 to modulate the AMPK/mTOR signaling axis in endothelial cells. *Proceedings of the National Academy of Sciences of the United States of America* **2015**, *112* (52), E7276-E7285, Article. DOI: 10.1073/pnas.1512867112.
- (15) Hu, H.; Wang, F. The liquid-vapor equilibria of TIP4P/2005 and BLYPSP-4F water models determined through direct simulations of the liquid-vapor interface. *Journal of Chemical Physics* **2015**, *142* (21), Article. DOI: 10.1063/1.4922166.
- (16) Hu, M. J.; Fritsch, I. Redox Cycling Behavior of Individual and Binary Mixtures of Catecholamines at Gold Microband Electrode Arrays. *Analytical Chemistry* **2015**, *87* (4), 2029-2032, Article. DOI: 10.1021/ac5042022.
- (17) Janowski, T.; Wolinski, K.; Pulay, P. Efficient calculation of the density response function from generalized polarizabilities. *Theoretical Chemistry Accounts* **2015**, *135* (1), Article. DOI: 10.1007/s00214-015-1761-0.
- (18) Jayanthi, S.; Morris, J.; Kachel, B.; Al-Ameer, M.; Henderson, R.; Adams, P. D.; Kumar, T. K. S. The versatility of isothermal titration calorimetry in modern biology. *Journal of Analytical & Bioanalytical Techniques* **2015**, *6* (3), Article. DOI: 10.4172/2155-9872.1000e121.
- (19) Jenkins, S. V.; Chen, S.; Chen, J. Gold-copper alloyed nanorods for metal-catalyzed organic reactions: implication of surface ligands on nanoparticle-based heterogeneous catalysis. *Tetrahedron Letters* **2015**, *56* (23), 3368-3372, Article. DOI: 10.1016/j.tetlet.2015.03.041.
- (20) Jenkins, S. V.; Gohman, T. D.; Miller, E. K.; Chen, J. Synthesis of Hollow Gold-Silver Alloyed Nanoparticles: A "Galvanic Replacement" Experiment for Chemistry and Engineering Students. *Journal of Chemical Education* **2015**, *92* (6), 1056-1060, Article. DOI: 10.1021/acs.jchemed.5b00042.
- (21) Jenkins, S. V.; Qu, H.; Mudalige, T.; Ingle, T. M.; Wang, R.; Wang, F.; Howard, P. C.; Chen, J.; Zhang, Y. Rapid determination of plasmonic nanoparticle agglomeration status in blood. *Biomaterials* **2015**, *51*, 226-237, Article. DOI: 10.1016/j.biomaterials.2015.01.072.
- (22) Keeler, G. D.; Durdik, J. M.; Stenken, J. A. Effects of delayed delivery of dexamethasone-21-phosphate via subcutaneous microdialysis implants on macrophage activation in rats. *Acta Biomaterialia* **2015**, *23*, 27-37, Article. DOI: 10.1016/j.actbio.2015.05.011.

- (23) Keeler, G. D.; Durdik, J. M.; Stenken, J. A. Localized delivery of dexamethasone-21-phosphate via microdialysis implants in rat induces M(GC) macrophage polarization and alters CCL2 concentrations. *Acta Biomaterialia* **2015**, *12*, 11-20, Article. DOI: 10.1016/j.actbio.2014.10.022.
- (24) Keller, S.; Boguslawski, K.; Janowski, T.; Reiher, M.; Pulay, P. Selection of active spaces for multiconfigurational wavefunctions. *Journal of Chemical Physics* **2015**, *142* (24), Article. DOI: 10.1063/1.4922352.
- (25) Li, J.; Wang, F. Pairwise-additive force fields for selected aqueous monovalent ions from adaptive force matching. *Journal of Chemical Physics* **2015**, *143* (19), Article. DOI: 10.1063/1.4935599.
- (26) Lisunova, M.; Dunklin, J. R.; Jenkins, S. V.; Chen, J. Y.; Roper, D. K. The unusual visible photothermal response of free standing multilayered films based on plasmonic bimetallic nanocages. *RSC Advances* **2015**, *5* (20), 15719-15727, Article. DOI: 10.1039/c5ra00682a.
- (27) Luspay-Kuti, A.; Chevrier, V. F.; Cordier, D.; Rivera-Valentin, E. G.; Singh, S.; Wagner, A.; Wasiak, F. C. Experimental constraints on the composition and dynamics of Titan's polar lakes. *Earth and Planetary Science Letters* **2015**, *410*, 75-83, Article. DOI: 10.1016/j.epsl.2014.11.023.
- (28) Ma, Z.; Li, J.; Wang, F. Continuous and Discontinuous Dynamic Crossover in Supercooled Water in Computer Simulations. *Journal of Physical Chemistry Letters* **2015**, *6* (16), 3170-3174, Article. DOI: 10.1021/acs.jpcllett.5b01348.
- (29) Makkar, S.; Liyanage, R.; Kannan, L.; Packialakshmi, B.; Lay, J. O.; Rath, N. C. Chicken Egg Shell Membrane Associated Proteins and Peptides. *Journal of Agricultural and Food Chemistry* **2015**, *63* (44), 9888-9898, Article. DOI: 10.1021/acs.jafc.5b04266.
- (30) Martin-Torres, F. J.; Zorzano, M. P.; Valentin-Serrano, P.; Harri, A. M.; Genzer, M.; Kemppinen, O.; Rivera-Valentin, E. G.; Jun, I.; Wray, J.; Madsen, M. B.; et al. Transient liquid water and water activity at Gale crater on Mars. *Nature Geoscience* **2015**, *8* (5), 357-361, Article. DOI: 10.1038/ngeo2412.
- (31) Morris, S. A.; Nguyen, T. H.; Zheng, N. Diastereoselective Oxidative C-N/C-O and C-N/C-N Bond Formation Tandems Initiated by Visible Light: Synthesis of Fused N-Arylindolines. *Advanced Synthesis & Catalysis* **2015**, *357* (10), 2311-2316, Article. DOI: 10.1002/adsc.201500317.
- (32) Muresanu, D. F.; Sharma, A.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Nyberg, F.; Sharma, H. S. Nanowired Delivery of Growth Hormone Attenuates Pathophysiology of Spinal Cord Injury and Enhances Insulin-Like Growth Factor-1 Concentration in the Plasma and the Spinal Cord. *Molecular Neurobiology* **2015**, *52* (2), 837-845, Article. DOI: 10.1007/s12035-015-9298-8.
- (33) Packialakshmi, B.; Liyanage, R.; Lay, J. O.; Okimoto, R.; Rath, N. C. Prednisolone-Induced Predisposition to Femoral Head Separation and the Accompanying Plasma Protein Changes in Chickens. *Biomarker Insights* **2015**, *10*, Article. DOI: 10.4137/bmi.s20268.
- (34) Ramidi, P.; Felton, C. M.; Subedi, B. P.; Zhou, H.; Tian, Z. R.; Gartia, Y.; Pierce, B. S.; Ghosh, A. Synthesis and characterization of manganese(III) and high-valent manganese-oxo complexes and their roles in conversion of alkenes to cyclic carbonates. *Journal of Co2 Utilization* **2015**, *9*, 48-57, Article. DOI: 10.1016/j.jcou.2014.12.004.

- (35) Rivera-Valentin, E. G.; Chevrier, V. F. Revisiting the Phoenix TECP data: Implications for regolith control of near-surface humidity on Mars. *Icarus* **2015**, *253*, 156-158, Article. DOI: 10.1016/j.icarus.2015.03.003.
- (36) Rusinova, R.; Koeppen, R. E.; Andersen, O. S. A general mechanism for drug promiscuity: Studies with amiodarone and other antiarrhythmics. *Journal of General Physiology* **2015**, *146* (6), 463-475, Article. DOI: 10.1085/jgp.201511470.
- (37) Sahore, V.; Fritsch, I. Microfluidic rotational flow generated by redox-magnetohydrodynamics (MHD) under laminar conditions using concentric disk and ring microelectrodes. *Microfluidics and Nanofluidics* **2015**, *18* (2), 159-166, Article. DOI: 10.1007/s10404-014-1427-6.
- (38) Sharma, A.; Muresanu, D. F.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Buzoianu, A. D.; Sharma, H. S. Sleep Deprivation-Induced Blood-Brain Barrier Breakdown and Brain Dysfunction are Exacerbated by Size-Related Exposure to Ag and Cu Nanoparticles. Neuroprotective Effects of a 5-HT3 Receptor Antagonist Ondansetron. *Molecular Neurobiology* **2015**, *52* (2), 867-881, Article. DOI: 10.1007/s12035-015-9236-9.
- (39) Sharma, H. S.; Feng, L. Y.; Lafuente, J. V.; Muresanu, D. F.; Tian, Z. R. R.; Patnaik, R.; Sharma, A. TiO₂-Nanowired Delivery of Mesenchymal Stem Cells Thwarts Diabetes-Induced Exacerbation of Brain Pathology in Heat Stroke: An Experimental Study in the Rat Using Morphological and Biochemical Approaches. *CNS & Neurological Disorders-Drug Targets* **2015**, *14* (3), 386-399, Article. DOI: 10.2174/1871527314666150318114335.
- (40) Shinn, S. E.; Liyanage, R.; Lay, J. O.; Proctor, A. Using MALDI MS for rapid analysis of food lipids. *Lipid Technology* **2015**, *27* (11), 255-257, Article. DOI: 10.1002/lite.201500055.
- (41) Wang, J.; Zheng, N. The Cleavage of a C-C Bond in Cyclobutylanilines by Visible-Light Photoredox Catalysis: Development of a 4+2 Annulation Method. *Angewandte Chemie-International Edition* **2015**, *54* (39), 11424-11427, Article. DOI: 10.1002/anie.201504076.
- (42) Xia, J.; Zheng, J.; Huang, D.; Tian, Z. R.; Chen, L.; Zhou, Z.; Ungar, P. S.; Qian, L. New model to explain tooth wear with implications for microwear formation and diet reconstruction. *Proceedings of the National Academy of Sciences of the United States of America* **2015**, *112* (34), 10669-10672, Article. DOI: 10.1073/pnas.1509491112.
- (43) Yadav, N.; Kumar, S.; Marlowe, T.; Chaudhary, A. K.; Kumar, R.; Wang, J.; O'Malley, J.; Boland, P. M.; Jayanthi, S.; Kumar, T. K. S.; et al. Oxidative phosphorylation-dependent regulation of cancer cell apoptosis in response to anticancer agents. *Cell Death & Disease* **2015**, *6*, Article. DOI: 10.1038/cddis.2015.305.
- (44) Zong, G. H.; Barber, E.; Aljewari, H.; Zhou, J. H.; Hu, Z. J.; Du, Y. C.; Shi, W. Q. Total Synthesis and Biological Evaluation of Ipomoeassin F and Its Unnatural 11R-Epimer. *Journal of Organic Chemistry* **2015**, *80* (18), 9279-9291, Article. DOI: 10.1021/acs.joc.5b01765.

2014 (n=50)

- (1) Alessa, F.; Hettiarachchy, N.; Rayaprolu, S. J.; Benamara, M.; Greathouse, D.; Singh, S. Stability of Nano Encapsulated Rice Bran Derived Bioactive Pentapeptide in Apple Juice. *Journal of Food Processing & Technology* **2014**, 5, Article. DOI: 10.4172/2157-7110.1000356.
- (2) Bajpai, G.; Simmen, R. C. M.; Stenken, J. A. In vivo microdialysis sampling of adipokines CCL2, IL-6, and leptin in the mammary fat pad of adult female rats. *Molecular Biosystems* **2014**, 10 (4), 806-812, Article. DOI: 10.1039/c3mb70308h.
- (3) Beckford, S.; Cai, J.; Chen, J.; Zou, M. Use of Au Nanoparticle-Filled PTFE Films to Produce Low-Friction and Low-Wear Surface Coatings. *Tribology Letters* **2014**, 56 (2), 223-230, Article. DOI: 10.1007/s11249-014-0402-4.
- (4) Chaudhuri, A.; Haldar, S.; Sun, H. Y.; Koeppe, R. E.; Chattopadhyay, A. Importance of indole N-H hydrogen bonding in the organization and dynamics of gramicidin channels. *Biochimica et Biophysica Acta-Biomembranes* **2014**, 1838 (1), 419-428, Article. DOI: 10.1016/j.bbamem.2013.10.011.
- (5) Chen, H.; Golder, M. R.; Wang, F.; Jasti, R.; Swan, A. K. Raman spectroscopy of carbon nanohoops. *Carbon* **2014**, 67, 203-213, Article. DOI: 10.1016/j.carbon.2013.09.082.
- (6) Crane, C. C.; Tao, J.; Wang, F.; Zhu, Y. M.; Chen, J. Y. Mask-Assisted Seeded Growth of Segmented Metallic Heteronanostructures. *Journal of Physical Chemistry C* **2014**, 118 (48), 28134-28142, Article. DOI: 10.1021/jp5094433.
- (7) Fan, Q.-H.; Claunch, K. A.; Striegler, S. Structure-Activity Relationship of Highly Potent Galactonoamidine Inhibitors toward beta-Galactosidase (*Aspergillus oryzae*). *Journal of Medicinal Chemistry* **2014**, 57 (21), 8999-9009, Article. DOI: 10.1021/jm501111y.
- (8) Fan, Q.-H.; Striegler, S.; Langston, R. G.; Barnett, J. D. Evaluating N-benzylgalactonoamidines as putative transition state analogs for beta-galactoside hydrolysis. *Organic & Biomolecular Chemistry* **2014**, 12 (17), 2792-2800, Article. DOI: 10.1039/c4ob00153b.
- (9) Ghanem, A. F.; Badawy, A. A.; Ismail, N.; Tian, Z. R.; Rehim, M. H. A.; Rabia, A. Photocatalytic activity of hyperbranched polyester/TiO₂ nanocomposites. *Applied Catalysis a-General* **2014**, 472, 191-197, Article. DOI: 10.1016/j.apcata.2013.12.023.
- (10) Ghanem, A. F.; Williams, R. L.; Rehim, M. H. A.; Tian, Z. R. Tuning a hydrophilic nanobelt's crystal lattice for interface-tailored nanocompositing with a hydrophobic polymer. *Journal of Materials Science* **2014**, 49 (21), 7382-7390, Article. DOI: 10.1007/s10853-014-8394-x.
- (11) Gotz, M. G.; Takeuchi, H.; Goldfogel, M. J.; Warren, J. M.; Fennell, B. D.; Heyes, C. D. Visible-Light Photocatalyzed Cross-Linking of Diacetylene Ligands by Quantum Dots to Improve Their Aqueous Colloidal Stability. *Journal of Physical Chemistry B* **2014**, 118 (49), 14103-14109, Article. DOI: 10.1021/jp505340c.
- (12) Gough, R. V.; Chevrier, V. F.; Tolbert, M. A. Formation of aqueous solutions on Mars via deliquescence of chloride-perchlorate binary mixtures. *Earth and Planetary Science Letters* **2014**, 393, 73-82, Article. DOI: 10.1016/j.epsl.2014.02.002.

- (13) Hanley, J.; Dalton, J. B.; Chevrier, V. F.; Jamieson, C. S.; Barrows, R. S. Reflectance spectra of hydrated chlorine salts: The effect of temperature with implications for Europa. *Journal of Geophysical Research-Planets* **2014**, *119* (11), 2370-2377, Article. DOI: 10.1002/2013je004565.
- (14) Hernandez, O.; Pulay, P.; Maitre, P.; Paizs, B. Zundel-Type H-Bonding in Biomolecular Ions. *Journal of the American Society for Mass Spectrometry* **2014**, *25* (9), 1511-1514, Article. DOI: 10.1007/s13361-014-0950-8.
- (15) Janowski, T. Near Equivalence of Intrinsic Atomic Orbitals and Quasiatomic Orbitals. *Journal of Chemical Theory and Computation* **2014**, *10* (8), 3085-3091, Article. DOI: 10.1021/ct500245f.
- (16) Jayanthi, S.; Kang, S. W.; Bingham, D.; Tessaro, B. A.; Kumar, T. K. S.; Kuenzel, W. J. Identification of antagonists to the vasotocin receptor sub-type 4 (VT4R) involved in stress by molecular modelling and verification using anterior pituitary cells. *Journal of Biomolecular Structure & Dynamics* **2014**, *32* (4), 648-660, Article. DOI: 10.1080/07391102.2013.787025.
- (17) Jayanthi, S.; Kathir, K. M.; Rajalingam, D.; Furr, M.; Daily, A.; Thurman, R.; Rutherford, L.; Chandrashekar, R.; Adams, P.; Prudovsky, I.; et al. Copper binding affinity of the C2B domain of synaptotagmin-1 and its potential role in the nonclassical secretion of acidic fibroblast growth factor. *Biochimica et Biophysica Acta-Proteins and Proteomics* **2014**, *1844* (12), 2155-2163, Article. DOI: 10.1016/j.bbapap.2014.09.008.
- (18) Jayanthi, S.; Koppolu, B. P.; Smith, S. G.; Jalah, R.; Bear, J.; Rosati, M.; Pavlakis, G. N.; Felber, B. K.; Zaharoff, D. A.; Kumar, T. K. S. Efficient production and purification of recombinant human interleukin-12 (IL-12) overexpressed in mammalian cells without affinity tag. *Protein Expression and Purification* **2014**, *102*, 76-84, Article. DOI: 10.1016/j.pep.2014.07.002.
- (19) Jeon, M.; Jenkins, S.; Oh, J.; Kim, J.; Peterson, T.; Chen, J. Y.; Kim, C. Nonionizing photoacoustic cystography with near-infrared absorbing gold nanostructures as optical-opaque tracers. *Nanomedicine* **2014**, *9* (9), 1377-1387, Article. DOI: 10.2217/nnm.13.103.
- (20) Katikaneni, R.; Ponnapakkam, T.; Matsushita, O.; Sakon, J.; Gensure, R. Treatment and prevention of chemotherapy-induced alopecia with PTH-CBD, a collagen-targeted parathyroid hormone analog, in a non-depilated mouse model. *Anti-Cancer Drugs* **2014**, *25* (1), 30-38, Article. DOI: 10.1097/cad.0b013e3283650bff.
- (21) Katikaneni, R.; Ponnapakkam, T.; Seymour, A.; Sakon, J.; Gensure, R. Parathyroid hormone linked to a collagen binding domain promotes hair growth in a mouse model of chemotherapy-induced alopecia in a dose-dependent manner. *Anti-Cancer Drugs* **2014**, *25* (7), 819-825, Article. DOI: 10.1097/cad.0000000000000110.
- (22) Keeler, G. D.; Durdik, J. M.; Stenken, J. A. Comparison of microdialysis sampling perfusion fluid components on the foreign body reaction in rat subcutaneous tissue. *European Journal of Pharmaceutical Sciences* **2014**, *57*, 60-67, Article. DOI: 10.1016/j.ejps.2013.11.005.
- (23) Koppolu, B. P.; Smith, S. G.; Ravindranathan, S.; Jayanthi, S.; Kumar, T. K. S.; Zaharoff, D. A. Controlling chitosan-based encapsulation for protein and vaccine delivery. *Biomaterials* **2014**, *35* (14), 4382-4389, Article. DOI: 10.1016/j.biomaterials.2014.01.078.

- (24) Kounaves, S. P.; Chaniotakis, N. A.; Chevrier, V. F.; Carrier, B. L.; Folds, K. E.; Hansen, V. M.; McElhoney, K. M.; O'Neil, G. D.; Weber, A. W. Identification of the perchlorate parent salts at the Phoenix Mars landing site and possible implications. *Icarus* **2014**, 232, 226-231, Article. DOI: 10.1016/j.icarus.2014.01.016.
- (25) Lisunova, M.; Norman, J.; Wei, X.; Jenkins, S.; Chen, J.; Roper, D. K. Aqueous dispersion of plasmonic hollow metal nanoparticles. *Materials Letters* **2014**, 117, 241-243, Article. DOI: 10.1016/j.matlet.2013.11.093.
- (26) Liu, C. W.; Wang, F.; Yang, L. J.; Li, X. Z.; Zheng, W. J.; Gao, Y. Q. Stable Salt-Water Cluster Structures Reflect the Delicate Competition between Ion-Water and Water-Water Interactions. *Journal of Physical Chemistry B* **2014**, 118 (3), 743-751, Article. DOI: 10.1021/jp408439j.
- (27) Ma, Z. H.; Anick, D.; Tuckerman, M. E. Ab Initio Molecular Dynamics Study of the Aqueous HOO- Ion. *Journal of Physical Chemistry B* **2014**, 118 (28), 7937-7945, Article. DOI: 10.1021/jp5008335.
- (28) Masse, M.; Beck, P.; Schmitt, B.; Pommerol, A.; McEwen, A.; Chevrier, V.; Brissaud, O.; Sejourne, A. Spectroscopy and detectability of liquid brines on mars. *Planetary and Space Science* **2014**, 92, 136-149, Article. DOI: 10.1016/j.pss.2014.01.018.
- (29) Nguyen, T. H.; Maity, S.; Zheng, N. Visible light mediated intermolecular [3+2] annulation of cyclopropylanilines with alkynes. *Beilstein Journal of Organic Chemistry* **2014**, 10, 975-980, Article. DOI: 10.3762/bjoc.10.96.
- (30) Nguyen, T. H.; Morris, S. A.; Zheng, N. Intermolecular [3+2] Annulation of Cyclopropylanilines with Alkynes, Enynes, and Diynes via Visible Light Photocatalysis. *Advanced Synthesis & Catalysis* **2014**, 356 (13), 2831-2837, Article. DOI: 10.1002/adsc.201400742.
- (31) Nuding, D. L.; Rivera-Valentin, E. G.; Davis, R. D.; Gough, R. V.; Chevrier, V. F.; Tolbert, M. A. Deliquescence and efflorescence of calcium perchlorate: An investigation of stable aqueous solutions relevant to Mars. *Icarus* **2014**, 243, 420-428, Article. DOI: 10.1016/j.icarus.2014.08.036.
- (32) Packialakshmi, B.; Liyanage, R.; Rasaputra, K. S.; Lay, J. O.; Rath, N. C. Isolation and characterization of chicken bile matrix metalloproteinase. *Poultry Science* **2014**, 93 (6), 1495-1502, Article. DOI: 10.3382/ps.2013-03848.
- (33) Peterson, E. C.; Hambuchen, M. D.; Tawney, R. L.; Gunnell, M. G.; Cowell, J. L.; Lay, J. O.; Blough, B. E.; Carroll, F. I.; Owens, S. M. Simple Radiometric Method for Accurately Quantitating Epitope Densities of Hapten-Protein Conjugates with Sulphydryl Linkages. *Bioconjugate Chemistry* **2014**, 25 (12), 2112-2115, Article. DOI: 10.1021/bc500456z.
- (34) Pulay, P. Analytical derivatives, forces, force constants, molecular geometries, and related response properties in electronic structure theory. *Wiley Interdisciplinary Reviews-Computational Molecular Science* **2014**, 4 (3), 169-181, Article. DOI: 10.1002/wcms.1171.
- (35) Sahore, V.; Fritsch, I. Redox-Magnetohydrodynamics, Flat Flow Profile-Guided Enzyme Assay Detection: Toward Multiple, Parallel Analyses. *Analytical Chemistry* **2014**, 86 (19), 9405-9411, Article. DOI: 10.1021/ac502014t.

- (36) Sears, D. W.; Beauford, R. The Sutter's Mill meteorite: Thermoluminescence data on thermal and metamorphic history. *Meteoritics & Planetary Science* **2014**, *49* (11), 2047-2055, Article. DOI: 10.1111/maps.12259.
- (37) Shinn, S.; Liyanage, R.; Lay, J.; Proctor, A. Improved Fatty Acid Analysis of Conjugated Linoleic Acid Rich Egg Yolk Triacylglycerols and Phospholipid Species. *Journal of Agricultural and Food Chemistry* **2014**, *62* (28), 6608-6615, Article. DOI: 10.1021/jf501100y.
- (38) Sides, C. R.; Stenken, J. A. Microdialysis sampling techniques applied to studies of the foreign body reaction. *European Journal of Pharmaceutical Sciences* **2014**, *57*, 74-86, Article. DOI: 10.1016/j.ejps.2013.11.002.
- (39) Sivakumar, G.; Jeong, K.; Lay, J. O. Biomass and RRR-alpha-tocopherol production in *Stichococcus bacillaris* strain siva2011 in a balloon bioreactor. *Microbial Cell Factories* **2014**, *13*, Article. DOI: 10.1186/1475-2859-13-79.
- (40) Sivakumar, G.; Jeong, K.; Lay, J. O., Jr. Bioprocessing of *Stichococcus bacillaris* strain siva2011. *Biotechnology for Biofuels* **2014**, *7*, Article. DOI: 10.1186/1754-6834-7-62.
- (41) Sparks, K. A.; Gleason, N. J.; Gist, R.; Langston, R.; Greathouse, D. V.; Koeppe, R. E. Comparisons of Interfacial Phe, Tyr, and Trp Residues as Determinants of Orientation and Dynamics for GWALP Transmembrane Peptides. *Biochemistry* **2014**, *53* (22), 3637-3645, Article. DOI: 10.1021/bi500439x.
- (42) Srivatsan, A.; Jenkins, S. V.; Jeon, M.; Wu, Z.; Kim, C.; Chen, J.; Pandey, R. K. Gold Nanocage-Photosensitizer Conjugates for Dual-Modal Image-Guided Enhanced Photodynamic Therapy. *Theranostics* **2014**, *4* (2), 163-174, Article. DOI: 10.7150/thno.7064.
- (43) Stratford, R.; Vu, C.; Sakon, J.; Katikaneni, R.; Gensure, R.; Ponnapakkam, T. Pharmacokinetics in Rats of a Long-Acting Human Parathyroid Hormone-Collagen Binding Domain Peptide Construct. *Journal of Pharmaceutical Sciences* **2014**, *103* (2), 768-775, Article. DOI: 10.1002/jps.23843.
- (44) Tisdale, E.; Kennedy, D.; Wilkins, C. Matrix-assisted laser desorption/ionization sample preparation optimization for structural characterization of poly(styrene-co-pentafluorostyrene) copolymers. *Analytica Chimica Acta* **2014**, *808*, 151-162, Article. DOI: 10.1016/j.aca.2013.09.040.
- (45) Tisdale, E.; Wilkins, C. Method development for compositional analysis of low molecular weight poly(vinyl acetate) by matrix-assisted/laser desorption-mass spectrometry and its application to analysis of chewing gum. *Analytica Chimica Acta* **2014**, *820*, 92-103, Article. DOI: 10.1016/j.aca.2014.02.042.
- (46) Vorobyov, I.; Olson, T. E.; Kim, J. H.; Koeppe, R. E.; Andersen, O. S.; Allen, T. W. Ion-Induced Defect Permeation of Lipid Membranes. *Biophysical Journal* **2014**, *106* (3), 586-597, Article. DOI: 10.1016/j.bpj.2013.12.027.
- (47) Wang, B. X.; Tisdale, E.; Trimpin, S.; Wilkins, C. L. Matrix-Assisted Ionization Vacuum for High-Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectrometers. *Analytical Chemistry* **2014**, *86* (14), 6792-6796, Article. DOI: 10.1021/ac500511g.

- (48) Wang, J.; Nguyen, T. H.; Hu, J.; Zheng, N. Ruthenium (II), Tris(2,2'-bipyrazine- κ N1, κ N1'),1 (OC-6-11). *e-EROS Encyclopedia of Reagents for Organic Synthesis* **2014**, 1-3, Article. DOI: 10.1002/047084289X.rn01827.
- (49) Wang, X.-m.; Qiu, Z.-m.; Zheng, N.; Qiu, J.-m. Foaming systems of nitrile rubber foam-metal gaskets. *Hecheng Xiangjiao Gongye* **2014**, 37 (1), 47-51, Article.
- (50) Wei, D.; Wang, F. Graphene: A partially ordered non-periodic solid. *Journal of Chemical Physics* **2014**, 141 (14), Article. DOI: 10.1063/1.4897255.

Journal Article - Miscellaneous (n=18)

Editorial Material: 11

Correction: 5

Method: 1

News Item: 1

(1) Albrecht, T.; Bohn, P. W.; Buckingham, M. A.; Cao, X. E.; Chen, D. F.; Chen, Q. J.; Corva, M.; Edwards, M. A.; Kamali, A. R.; Kanoufi, F.; et al. State of the art energy conversion at the nanointerface: general discussion. *Faraday Discussions* **2022**, 233 (0), 112-121, Editorial Material. DOI: 10.1039/d2fd90002e.

(2) Albrecht, T.; Cao, X. E.; Chen, D. F.; Corva, M.; Edwards, M. A.; Ewing, A.; Fornasaro, S.; Gooding, J. J.; Gundry, L.; Hirano-Iwata, A.; et al. Electrochemical data mining: from information to knowledge: general discussion. *Faraday Discussions* **2022**, 233 (0), 58-76, Editorial Material. DOI: 10.1039/d2fd90001g.

(3) Bohn, P. W.; Cao, X. K. E.; Chang, S.; Chen, D. F.; Confederat, S.; Duleba, D.; Peisan, E.; Edwards, M. A.; Ewing, A.; Gundry, L.; et al. Advanced nanoelectrochemistry implementation: from concept to application: general discussion. *Faraday Discussions* **2022**, 233 (0), 354-373, Editorial Material. DOI: 10.1039/d2fd90004a.

(4) Buckingham, M. A.; Cao, X. K. E.; Chang, S.; Chen, H. Y.; Chen, Q. J.; Chinnathambi, S.; Edwards, M. A.; Fornasaro, S.; Gooding, J.; Hill, C.; et al. Emerging electrochemical methods at the nanointerface: general discussion. *Faraday Discussions* **2022**, 233 (0), 257-282, Editorial Material. DOI: 10.1039/d2fd90003c.

(5) Gough, R. V.; Chevrier, V. F.; Baustian, K. J.; Wise, M. E.; Tolbert, M. A. Laboratory studies of perchlorate phase transitions: Support for metastable aqueous perchlorate solutions on Mars (vol 312, pg 371, 2011). *Earth and Planetary Science Letters* **2014**, 387, 169-169, Correction. DOI: 10.1016/j.epsl.2013.11.042.

(6) Jayanthi, S.; Gundampati, R. K.; Kumar, T. K. S. Simple and Efficient Purification of Recombinant Proteins Using the Heparin-Binding Affinity Tag. *Current Protocols in Protein Science* **2017**, 90 (1), Method. DOI: 10.1002/cpps.41.

(7) Johnson, M.; Simons, J.; Wang, F. From Quantum Mechanics to Molecular Mechanics: A Tribute to Kenneth D. Jordan. *Journal of Physical Chemistry A* **2014**, 118 (35), 7167-7168, Editorial Material. DOI: 10.1021/jp500588d.

- (8) Jouha, J.; Li, F.; Su, W.-T.; Fan, C.; Yang, D.; Xiong, H. Editorial: Engineering Nucleic Acids-Based Functional Nanomaterials, Nanodrugs, and Biosensors. *Frontiers in Bioengineering and Biotechnology* **2022**, *10*, Editorial Material. DOI: 10.3389/fbioe.2022.915229.
- (9) Koppolu, B. P.; Smith, S. G.; Ravindranathan, S.; Jayanthi, S.; Kumar, T. K. S.; Zaharoff, D. A. Controlling chitosan-based encapsulation for protein and vaccine delivery (vol 35, pg 4382, 2014). *Biomaterials* **2015**, *73*, 308-308, Correction. DOI: 10.1016/j.biomaterials.2015.09.029.
- (10) Krylov, A. I.; Herbert, J. M.; Furche, F.; Head-Gordon, M.; Knowles, P. J.; Lindh, R.; Manby, F. R.; Pulay, P.; Skylaris, C. K.; Werner, H. J. What Is the Price of Open-Source Software? *Journal of Physical Chemistry Letters* **2015**, *6* (14), 2751-2754, Editorial Material. DOI: 10.1021/acs.jpclett.5b01258.
- (11) Li, J.; Wang, F. Pairwise-additive force fields for selected aqueous monovalent ions from adaptive force matching (vol 143, 194505, 2015). *Journal of Chemical Physics* **2015**, *143* (21), Correction. DOI: 10.1063/1.4936923.
- (12) Li, J.; Sun, K.; Li, J.; Meng, Q.; Fu, X.; Yin, W.-G.; Lu, D.; Li, Y.; Babzien, M.; Fedurin, M.; et al. Probing the pathway of an ultrafast structural phase transition to illuminate the transition mechanism in Cu₂S (vol 113, 041904, 2018). *Applied Physics Letters* **2018**, *113* (7), Correction. DOI: 10.1063/1.5050984.
- (13) Meeker, D. G.; Chen, J.; Smeltzer, M. S. Could targeted, antibiotic-loaded gold nanoconstructs be a new magic bullet to fight infection? *Nanomedicine* **2016**, *11* (18), 2379-2382, Editorial Material. DOI: 10.2217/nnm-2016-0260.
- (14) O'Donoghue, P.; Heinemann, I. U.; Fan, C. Editorial: Synthetic Nucleic Acids for Expanding Genetic Codes and Probing Living Cells. *Frontiers in Bioengineering and Biotechnology* **2021**, *9*, Editorial Material. DOI: 10.3389/fbioe.2021.720534.
- (15) Polasa, A.; Moradi, M. Towards a purely physics-based computational binding affinity estimation. *Nature Computational Science* **2023**, *3* (1), 10-10, Editorial Material. DOI: 10.1038/s43588-023-00396-4.
- (16) Rummel, J. D.; Beaty, D. W.; Jones, M. A.; Bakermans, C.; Barlow, N. G.; Boston, P. J.; Chevrier, V. F.; Clark, B. C.; de Vera, J. P. P.; Gough, R. V.; et al. A New Analysis of Mars "Special Regions": Findings of the Second MEPAG Special Regions Science Analysis Group (SR-SAG2). *Astrobiology* **2014**, *14* (11), 887-968, News Item. DOI: 10.1089/ast.2014.1227.
- (17) Skrabalak, S. E.; Chen, J. Y.; Neretina, S.; Qin, D. Beyond the Gold Standard: Bimetallic Nanomaterials Bring New Properties and Functions. *Particle & Particle Systems Characterization* **2018**, *35* (5), Editorial Material. DOI: 10.1002/ppsc.201800111.
- (18) Tisdale, E.; Kennedy, D.; Xu, X. D.; Wilkins, C. Matrix-assisted laser desorption/ionization sample preparation optimization for structural characterization of poly(styrene-co-pentafluorostyrene) copolymers. (vol 808, pg 151, 2014). *Analytica Chimica Acta* **2014**, *827*, 111-111, Correction. DOI: 10.1016/j.aca.2014.04.007.

Meeting Abstract (n=370)

2023 (n=14) – up to November

- (1) Badiee, S. A.; Moradi, M. A molecular dynamics study of the FGF1/FGF2 heterodimer in human fibroblasts. *Biophysical Journal* **2023**, 122 (3), A181-A181, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.1120.
- (2) Brownd, M.; Moradi, M. Comparison of cyclic AMP binding activity within HCN channel subfamily using atomistic molecular dynamics simulations of isolated cyclic nucleotide binding domains. *Biophysical Journal* **2023**, 122 (3), A138-A138, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.908.
- (3) Chen, J. Noble metal nanostructures in the fight against bacterial infections. *Abstracts of Papers of the American Chemical Society* **2023**, 265, Meeting Abstract.
- (4) Derakhshani-Molayousefi, M.; Kumar, V. G.; Moradi, M. Structural effects of ALS-associated mutations on profiling. *Biophysical Journal* **2023**, 122 (3), 334A-334A, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.1862.
- (5) Girodat, D. J.; Nishima, W.; Holm, M.; Rundlet, E. J.; Prajapati, J. D.; Amaya, J. L. A.; Fischer, K.; Blanchard, S. C.; Sanbonmatsu, K. Y. Ribosome hyper-swivel head domain motions are required for translocation and resetting. *Biophysical Journal* **2023**, 122 (3), A360-A360, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.1990.
- (6) Girodat, D. J.; Wieden, H. J.; Blanchard, S. C.; Sanbonmatsu, K. Y. Geometric alignment of aminoacyl-tRNA relative to catalytic centers of the ribosome underpins accurate mRNA decoding. *Biophysical Journal* **2023**, 122 (3), A488-A488, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.2611.
- (7) Heyes, C. D. Complex structural-optical property relationships in ternary and quaternary copper-indium-(zinc)-chalcogenide quantum dots at the ensemble and single particle level. *Abstracts of Papers of the American Chemical Society* **2023**, 265, Meeting Abstract.
- (8) Isu, U.; Polasa, A.; Tabari, S. H.; Derakhshani-Molayousefi, M.; Moradi, M. Cholesterol dependence on the conformational changes of metabotropic glutamate receptor 1 (mGluR1). *Biophysical Journal* **2023**, 122 (3), A503-A503, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.2683.
- (9) Khodadadi, E.; Moradi, M. Cholesterol concentration effect on bilayer membranes and its role in designing efficient liposomal drug delivery systems. *Biophysical Journal* **2023**, 122 (3), A365-A365, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.2015.
- (10) Moradi, M.; Lu, M.; Vafabakhsh, R.; Heyes, C. D. An integrative approach to molecular dynamics and single molecule FRET techniques. *Biophysical Journal* **2023**, 122 (3), A36-A37, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.412.
- (11) Polasa, A.; Immadisetty, K.; Shelton, R.; Moradi, M. Elucidating the molecular basis of spontaneous activation in an engineered mechanosensitive channel. *Biophysical Journal* **2023**, 122 (3), A192-A192, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.1175.

- (12) Sauve, S. M.; Lu, M.; Moradi, M. Atomic-level characterization of the human immunodeficiency virus type 1 envelope glycoproteins using molecular dynamic simulations. *Biophysical Journal* **2023**, 122 (3), A473-A474, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.2538.
- (13) Wang, F. Role of dipole cooperativity and polarization frustration in the conformation distribution of hydrated peptides. *Abstracts of Papers of the American Chemical Society* **2023**, 265, Meeting Abstract.
- (14) Williamson, J.; Lu, M.; Moradi, M. Integration of smFRET and molecular dynamics to characterize conformational dynamics of the spike protein of wild-type SARS-CoV-2 and its variants. *Biophysical Journal* **2023**, 122 (3), A38-A38, Meeting Abstract. DOI: 10.1016/j.bpj.2022.11.419.

2022 (n=27)

- (1) Badiee, S.; Kumar, V. G.; Polasa, A.; Moradi, M. Molecular dynamics investigation of the ph-dependent influenza hemagglutinin conformational change. *Biophysical Journal* **2022**, 121 (3), A39-A39, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.2503.
- (2) Batey, J. E.; Yang, M.; Dong, B. Electronically tunable lens in three-dimensional single particle tracking by means of parallax. *Abstracts of Papers of the American Chemical Society* **2022**, 264, Meeting Abstract.
- (3) Brownd, M.; Moradi, M. Using molecular dynamics simulations to characterize the structural/conformational effect of amino acid substitutions at the second position of the intrinsically disordered mitochondrial localization peptide (MLP). *Biophysical Journal* **2022**, 121 (3), A525-A525, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.2764.
- (4) Canote, C.; Kilyanek, S. M. Electrochemically mediated DODH in early transition metal-dioxo complexes. *Abstracts of Papers of the American Chemical Society* **2022**, 264, Meeting Abstract.
- (5) Chen, J. Controlling morphology of Ni-Fe-based nanocatalysts for oxygen evolution reaction. *Abstracts of Papers of the American Chemical Society* **2022**, 263, Meeting Abstract.
- (6) Clem, C.; Sharma, B.; Striegler, S. Modularly designed polyacrylate microgels for antibacterial activity against *Staphylococcus aureus*. *Abstracts of Papers of the American Chemical Society* **2022**, 263, Meeting Abstract.
- (7) Coridan, R. H. Exploiting Disordered Photonics for Light Trapping in Photoelectrochemical Energy Conversion Applications. *Abstracts of Papers of the American Chemical Society* **2022**, SWRM 217, Meeting Abstract.
- (8) DeNike, K. A.; Stephens, J. C.; Kilyanek, S. M. Catalytic dehydration of secondary alcohols by tungsten dioxo complexes. *Abstracts of Papers of the American Chemical Society* **2022**, 264, Meeting Abstract.
- (9) Derakhshani-Molayousefi, M.; Isu, U.; Moradi, M. Structural dynamics of prefusion spike protein of SARS-CoV-2 and its variants. *Biophysical Journal* **2022**, 121 (3), A195-A196, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.1767.

- (10) Dong, B.; Yang, M.; Bartey, J. Single-molecule photocatalytic dynamics at individual defects in two-dimensional layered materials. *Abstracts of Papers of the American Chemical Society* **2022**, 264, Meeting Abstract.
- (11) Edwards, M. A.; McKelvey, K.; Kang, M.; Brunet Cabre, M.; Jones, N. B.; Unwin, P. R. Flexible open-source nanoscale electrochemical microscopy. *Abstracts of Papers of the American Chemical Society* **2022**, 263, Meeting Abstract.
- (12) Fang, N.; Cheng, X. D.; Chen, K. C.; Dong, B. Multi-Dimensional single particle tracking in live cells. *Biophysical Journal* **2022**, 121 (3), A318-A318, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.1167.
- (13) Isu, U. H.; Kumar, V. G.; Derakhshani-Molayousefi, M.; Polasa, A.; Moradi, M. Characterizing the roles of chemo-mechanical couplings in the differential behavior of SARS-CoV-1 and SARS-CoV-2 spike glycoprotein. *Biophysical Journal* **2022**, 121 (3), A526-A526, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.2770.
- (14) Kilyanek, S. M. Electrochemically mediated deoxygenation of biomass model compounds. *Abstracts of Papers of the American Chemical Society* **2022**, SWRM-262, Meeting Abstract.
- (15) Kilyanek, S. M.; Abshier, J.; Hallett, L.; Lea, M.; Momand, B.; Spence, S. K. Systematic study of the stability of immobilized inorganic redox-probes on carbon electrodes. *Abstracts of Papers of the American Chemical Society* **2022**, 264, Meeting Abstract.
- (16) Kumar, V. G.; Moradi, M. Physics-based computational framework for absolute binding affinity estimation. *Abstracts of Papers of the American Chemical Society* **2022**, 264, Meeting Abstract.
- (17) Losey, J.; Jauch, M.; Cortes-Cubero, A.; Wu, H. X.; Rivera, R.; Matteson, D. S.; Moradi, M. Simulating freely-diffusing single-molecule FRET data with consideration of protein conformational dynamics. *Biophysical Journal* **2022**, 121 (3), A445-A445, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.549.
- (18) Matthew, M. O.; Lay, J.; Liyanage, R. Protein equilibrium population snapshot hydrogen deuterium exchange electrospray ionization mass spectrometry measurements of the stability of wildtype human acidic fibroblast growth factor and the R136D variant. *Biophysical Journal* **2022**, 121 (3), A325-A325, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.1133.
- (19) Moradi, M.; Losey, J.; Goolsby, C.; Xu, Y. C.; Matteson, D. Addressing the embeddability problem in transition rate estimation from Markov state models. *Biophysical Journal* **2022**, 121 (3), A275-A275, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.1380.
- (20) Padmaswari, M. H.; Agrawal, S.; Nelson, C. E. Validation of Novel Safe-Harbor Sites for Targeted Genome Integration for Muscle Disease. *Molecular Therapy* **2022**, 30 (4), 493-493, Meeting Abstract.
- (21) Polasa, A.; Hettige, J. J.; Immadisetty, K.; Moradi, M. An investigation of the YidC-mediated membrane insertion of Pf3 coat protein using molecular dynamics simulations. *Biophysical Journal* **2022**, 121 (3), A324-A324, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.1126.

- (22) Rogers, A.; Niyonshuti, I.; Cai, A.; Wang, F.; Benamara, M.; Chen, J. Y.; Wang, Y. Real-time imaging of laser-induced nanowelding of silver nanoparticles in solution. *Biophysical Journal* **2022**, *121* (3), A426-A426, Meeting Abstract. DOI: 10.1016/j.bpj.2021.11.644.
- (23) Striegler, S. Selective disaccharide hydrolysis with microgel catalysts. *Abstracts of Papers of the American Chemical Society* **2022**, *263*, Meeting Abstract.
- (24) Tian, Y.; Acosta, R.; Fan, C.; Tian, R. Wireless real-time label free nano-biosensor for bacteria detection. *Abstracts of Papers of the American Chemical Society* **2022**, *264*, Meeting Abstract.
- (25) Tran, R.; Sanders, M. L.; Kilyanek, S. M. Catalytic reactions and electrochemical studies of a Mo-dioxo system supported by bulky pincer ligands. *Abstracts of Papers of the American Chemical Society* **2022**, *264*, Meeting Abstract.
- (26) Wang, F. Computing accurate and reliable thermodynamic properties of small molecules from MP2 and density functional theory with adaptive force matching. *Abstracts of Papers of the American Chemical Society* **2022**, *SWRM-256*, Meeting Abstract.
- (27) Yang, M.; Batey, J. E.; Dong, B. Multi-channel, multi-modality single particle orientational and rotational tracking. *Abstracts of Papers of the American Chemical Society* **2022**, *264*, Meeting Abstract.

2021 (n=22)

- (1) Abrego Tello, M. A.; Lotfi Marchoubeh, M.; Fritsch, I. Quantitative cyclic voltammetry: Coupling in vitro studies and time-dependent numerical approximations to determine heterogeneous electron transfer kinetics and diffusion coefficients. *Abstracts of Papers of the American Chemical Society* **2021**, *MWRM 131*, Meeting Abstract.
- (2) Adams, P. D. Biochemical and Biophysical Approaches to Characterize the Molecular Basis of Abnormal Cell Signaling Function Involving Ras-Related Proteins. *Abstracts of Papers of the American Chemical Society* **2021**, *MWRM 052*, Meeting Abstract.
- (3) Brownd, M. G.; Polasa, A.; Moradi, M. Investigation of Cyclic AMP Binding Interactions with Isolated Cyclic Nucleotide Binding Domain of HCN1 Channel using Atomistic Molecular Dynamics Simulations at Microsecond Timescale. *Biophysical Journal* **2021**, *120* (3), A292-A292, Meeting Abstract. DOI: 10.1016/j.bpj.2020.11.1875.
- (4) El-Khouly, A.; Polasa, A.; Kumar, V. G.; Moradi, M. An Investigation of the Disulfide Bridge Formation of a Thylakoid Protease using Nanosecond-Level MD Simulations. *Biophysical Journal* **2021**, *120* (3), A200-A200, Meeting Abstract. DOI: 10.1016/j.bpj.2020.11.1370.
- (5) Ghahfarokhi, S. A.; Kumar, V. G.; Moradi, M. Molecular Dynamics Investigation of the Influenza Hemagglutinin Conformational Changes. *Biophysical Journal* **2021**, *120* (3), A130-A130, Meeting Abstract. DOI: 10.1016/j.bpj.2020.11.991.

- (6) Hesan, S.; Abrego Tello, M. A.; Fritsch, I. Modeling ion migration in electrochemical systems under conditions involving heterogeneous electron transfer. *Abstracts of Papers of the American Chemical Society* **2021**, MWRM 138, Meeting Abstract.
- (7) Isu, U.; Kumar, V. G.; Polasa, A.; Moradi, M. Comparing the Dynamic Differences between X-ray and Cryo-EM Structures of Cannabinoid Receptor 1 using Molecular Dynamics Simulations. *Biophysical Journal* **2021**, 120 (3), A27-A27, Meeting Abstract. DOI: 10.1016/j.bpj.2020.11.424.
- (8) Kumar, V. G.; Ogden, D. S.; Moradi, M. An Investigation of the Conformational Dynamics of ABC Exporter PCAT1 using Microsecond-Level MD Simulations. *Biophysical Journal* **2021**, 120 (3), A133-A133, Meeting Abstract. DOI: 10.1016/j.bpj.2020.11.1005.
- (9) Kumar, V. G.; Ogden, D.; Isu, U.; Polasa, A.; Losey, J.; Moradi, M. Differential thermodynamics and kinetics of prefusion spike proteins of SARS-CoV-1 and 2. *Abstracts of Papers of the American Chemical Society* **2021**, MARM 140, Meeting Abstract.
- (10) Losey, J.; Kumar, V. G.; Baucom, D.; Furr, M.; Heyes, C. D.; Kumar, S.; Moradi, M. Integrating Molecular Dynamics and smFRET Data to Study the Conformational Ensemble of the C-Terminus of Albino3 Protein. *Biophysical Journal* **2021**, 120 (3), A85-A85, Meeting Abstract. DOI: 10.1016/j.bpj.2020.11.724.
- (11) Magness, M.; Fritsch, I. Electrochemical analysis of poly(3,4-ethylenedioxythiophene) (PEDOT)-modified electrodes in various aqueous/nonaqueous electrolyte solutions and implications for microfluidics using redox-magnetohydrodynamic. *Abstracts of Papers of the American Chemical Society* **2021**, MWRM 134, Meeting Abstract.
- (12) Moradi, M.; Kumar, V. G.; Ogden, D. S.; Isu, U. H.; Polasa, A.; Losey, J.; Derakhshani, M. Conformational free energy landscape of prefusion spike protein in SARS-CoV-1 and 2. *Abstracts of Papers of the American Chemical Society* **2021**, 262, Meeting Abstract.
- (13) Moradi, M.; Kumar, V. G.; Ogden, D. S.; Isu, U.; Losey, J. Differential Dynamic Behavior of Prefusion Spike Glycoproteins of Sars Coronaviruses 1 and 2. *Biophysical Journal* **2021**, 120 (3), A276-A276, Meeting Abstract. DOI: 10.1016/j.bpj.2020.11.1759.
- (14) Moradi, M.; Ogden, D. S. Similarities and differences of conformational transition pathways in uniporters, symporters, and antiporters of the major facilitator superfamily of transporters. *Abstracts of Papers of the American Chemical Society* **2021**, 262, Meeting Abstract.
- (15) Nicholson, A. G.; Fritsch, I. Fundamental studies of circular redox-magnetohydrodynamic microfluidics and adjacent counterflows with PEDOT-modified electrodes having different geometries and sizes. *Abstracts of Papers of the American Chemical Society* **2021**, MWRM 133, Meeting Abstract.
- (16) Ogden, D.; Immadisetty, K.; Goolsby, C.; Moradi, M. Conformational Transition Pathway of GkPOT. *Biophysical Journal* **2021**, 120 (3), A304-A304, Meeting Abstract. DOI: 10.1016/j.bpj.2020.11.1939.
- (17) Okoto, P.; Furr, M.; Baucom, D.; Kumar, V.; Moradi, M.; Heyes, C.; Henry, R.; Thallapuram, S. Structural Propensity in the C-terminal domain of the Albino3 translocase in thylakoids. *Protein Science* **2021**, 30, 118-119, Meeting Abstract. DOI: 10.1002/pro.4191.

- (18) Polasa, A.; Tabari, S. H.; Moradi, M. Developing Efficient Transfer Free Energy Calculation Methods for Hydrophobicity Predictions. *Biophysical Journal* **2021**, 120 (3), A115-A115, Meeting Abstract. DOI: 10.1016/j.bpj.2020.11.913.
- (19) Pulay, P. Analytical derivatives in quantum chemistry. *Abstracts of Papers of the American Chemical Society* **2021**, 262, Meeting Abstract.
- (20) Rathke, N.; Boyd, E. E.; Muldoon, T.; Fritsch, I. Coupling autofluorescence imaging of freshwater samples containing cyanobacteria with R-MHD microfluidic pumping toward investigation of harmful algal blooms. *Abstracts of Papers of the American Chemical Society* **2021**, MWRM 130, Meeting Abstract.
- (21) Sikes, J. C.; Wonner, K.; Nicholson, A. G.; Cignoni, P.; Fritsch, I.; Tschulik, K. Coupling of dark-field microscopy with redox-magnetohydrodynamics microfluidics to characterize individual nanoparticles in mixed suspensions. *Abstracts of Papers of the American Chemical Society* **2021**, MWRM 061, Meeting Abstract.
- (22) Yuan, Y.; Zheng, D.; Wang, F. Computing ensemble properties for small solute molecules and poly-peptides with MP2, LMP2, and density functional theory. *Abstracts of Papers of the American Chemical Society* **2021**, 262, Meeting Abstract.

2020 (n=22)

- (1) Acharya, P.; Manso, R.; Hoffman, A. S.; Hong, J.; Bare, S.; Chen, J.; Greenlee, L. F. Operando XAS of Fe_xNi_{100-x}O_y electrocatalysts for the oxygen evolution reaction reveals dynamic Fe and Ni chemistry. *Abstracts of Papers of the American Chemical Society* **2020**, 259, ENFL 068, Meeting Abstract.
- (2) Canote, C. A.; Tran, R.; Kilyanek, S. M. Proton coupled electron transfer behavior of metal-oxo deoxydehydration catalysts. *Abstracts of Papers of the American Chemical Society* **2020**, 259, YCC 008, Meeting Abstract.
- (3) Elmendorf, T.; Scharlau, M.; Millett, F. Determination of the Binding Interaction between Mitochondrial Electron Transport Chain Proteins Cytochrome C and Cytochrome C Oxidase. *Biophysical Journal* **2020**, 118 (3), A609-A610, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.3291.
- (4) Furr, M.; Okoto, P.; Baucom, D.; Kumar, V.; Moradi, M.; Heyes, C.; Henry, R. L.; Kumar, T. K. S. Structural Propensity in the C-terminal Domain of the ALBino3 Translocase in Thylakoids. *FASEB Journal* **2020**, 34, 2, Meeting Abstract. DOI: 10.1096/fasebj.2020.34.s1.07072.
- (5) Isu, U.; Tabari, S. H.; Kumar, V. G.; Moradi, M. Effect of Cholesterol on the Structural Dynamics of Metabotropic Glutamate Receptor (mGluR(1)): A Molecular Dynamics Study. *Biophysical Journal* **2020**, 118 (3), A525-A525, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.2885.
- (6) Kilyanek, S. M. ... All that is seen and unseen.. Visual impairments in the modern inorganic research environment. *Abstracts of Papers of the American Chemical Society* **2020**, 259, PROF 055, Meeting Abstract.

- (7) Koeppe, R. E.; McKay, M. J. Lipid-Dependent Titration of Glutamic Acid at a Membrane Interface. *Biophysical Journal* **2020**, *118* (3), A392-A393, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.2234.
- (8) Kumar, V. G.; Ogden, D. S.; Polasa, A.; Moradi, M. An Investigation of the Influenza Hemagglutinin Membrane Fusion Process using Microsecond-Level MD Simulations. *Biophysical Journal* **2020**, *118* (3), A57-A57, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.491.
- (9) Lowe, J.; Mehrabi, H.; Coridan, R. Delineating photothermal and photoexcitation effects in the photoelectrodeposition of cuprous oxide. *Abstracts of Papers of the American Chemical Society* **2020**, *259*, INOR 913, Meeting Abstract.
- (10) Marr, K. A.; McKay, M.; Greathouse, D. V.; Koeppe, R. E. Effect of pH and Lipid Composition on Membrane-Spanning Helices with Glutamic Acid Examined by Solid-State Nmr. *Biophysical Journal* **2020**, *118* (3), A393-A393, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.2235.
- (11) Moradi, M. An Integrative Approach to Single-Molecule FRET Spectroscopy and Molecular Dynamics Simulations for the Study of Intrinsically Disordered Proteins. *Biophysical Journal* **2020**, *118* (3), A143-A143, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.906.
- (12) Muhoza, D.; Duverna, E.; Montoya-Beltran, A.; Adams, P. D. Characterizing the Influence of Two Small Molecule Targets Towards the Ras-Related Protein Cdc42. *Biophysical Journal* **2020**, *118* (3), A513-A513, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.2826.
- (13) Neel, E. M.; Scharlau, M.; Millett, F. Regulation of Electron Transfer from Cytochrome C to Cytochrome C Oxidase by Phosphorylation of CC THR-28. *Biophysical Journal* **2020**, *118* (3), A608-A609, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.3286.
- (14) Nunn, B.; McKay, M.; Greathouse, D. V.; Koeppe, R. E. Effect of Charged Lipids on the Ionization Behavior of Glutamic Acid-Containing Transmembrane Helices. *Biophysical Journal* **2020**, *118* (3), A391-A391, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.2228.
- (15) Parson, C.; Scharlau, M.; Millett, F. The Effect of Multiple Phosphorylations on the Interaction between Cytochrome C and Cytochrome C Oxidase. *Biophysical Journal* **2020**, *118* (3), A608-A608, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.3284.
- (16) Polasa, A.; Hettige, J. J.; Immadisetty, K.; Moradi, M. An Investigation of the YidC-Mediated Membrane Insertion of a Pf3 Coat Protein Using MD Simulations. *Biophysical Journal* **2020**, *118* (3), A365-A365, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.2095.
- (17) Price, J. R.; Afrose, F.; Koeppe, R. E. Attempted "Rescue" of Glutamic Acid by Arginine in a Transmembrane Helix. *Biophysical Journal* **2020**, *118* (3), A395-A395, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.2245.
- (18) Sadoon, A. A.; Khadka, P.; Freeland, J.; Gundampati, R.; Mason, R.; Ruiz, M.; Thallapuram, S. K.; Chen, J.; Wang, Y. Silver Ions Caused Faster Diffusion of H-NS Proteins in Live *E. coli* by Weakening the Binding Between H-NS Proteins and DNA. *Biophysical Journal* **2020**, *118* (3), A520-A520, Meeting Abstract. DOI: 10.1016/j.bpj.2019.11.2861.

- (19) Sharma, B.; Clem, C.; Striegler, S. Polyacrylate microgels as antimicrobial agents. *Abstracts of Papers of the American Chemical Society* **2020**, 259, COLL 180, Meeting Abstract.
- (20) Sharma, B.; Orizu, I.; Striegler, S. Bio-inspired cross-linked microgels with catalytic function. *Abstracts of Papers of the American Chemical Society* **2020**, 259, PMSE 732, Meeting Abstract.
- (21) Sreenivasulu, B.; Gundampati, R. K.; Furr, M.; Agrawal, S.; Alraawi, Z.; Thallapuram, S. K.; Ceballos, R. M. Stability Comparisons between Natural Archaeal and Engineered Archaeal-Bacterial Heat-Shock Protein Subunits (alpha,beta, and beta-cohesin) and their Oligomeric Complexes. *FASEB Journal* **2020**, 34 (S1), Meeting Abstract. DOI: 10.1096/fasebj.2020.34.s1.09199.
- (22) Striegler, S.; Sharma, B. Functional macromolecular glycosidase model. *Abstracts of Papers of the American Chemical Society* **2020**, 259, INOR 011, Meeting Abstract.

2019 (n=29)

- (1) Afrose, F.; Greathouse, D. V.; Koeppe, R. E. Position Dependent Orientation Difference of Transmembrane Peptides Flanked by Single or Multiple Histidine Residues. *Biophysical Journal* **2019**, 116 (3), A516-A516, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.2784.
- (2) Baguet, T.; Verhoeven, J.; De Lombaerde, S.; Piron, S.; Descamps, B.; Vanhove, C.; Beyzavi, H.; De Vos, F. Radiosynthesis, in vitro and in vivo evaluation of [F-18]Fluorophenylglutamine and [F-18]Fluorbiphenylglutamine as novel ASCT-2 directed tumor tracers. *Journal of Labelled Compounds & Radiopharmaceuticals* **2019**, 62, S500-S502, Meeting Abstract. DOI: 10.1002/jlcr.3725.
- (3) Beyzavi, M. H.; Mandal, D.; Strebl, M.; Neuman, C. N.; D'Amato, E.; Chen, J.; Hooker, J. M.; Ritter, T. 18F-deoxyfluorination of phenols via Ru π-complexes for the synthesis of positron emission tomography (PET) tracers. *Abstracts of Papers of the American Chemical Society* **2019**, 258, ORGN 012, Meeting Abstract.
- (4) Brownd, M.; McKay, M. J.; Greathouse, D. V.; Andersen, O. S.; Koeppe, R. E. Novel F13,F15 Gramicidin Subunits Predicted to Cross Bilayer Membranes and form Ion Channels. *Biophysical Journal* **2019**, 116 (3), A512-A512, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.2762.
- (5) Caviness, P.; Mima, T.; Matsushita, O.; Sakon, J. Using Site-directed Mutagenesis alongside a Collagen binding assay to reveal the role of Polycystic Kidney Disease domain in ColH Collagenase. *FASEB Journal* **2019**, 33, 631.637-631.637, Meeting Abstract. DOI: 10.1096/fasebj.2019.33.1_supplement.631.7.
- (6) Fan, C.; Gan, Q. Studying Lysine Acetylation of Aminoacyl-tRNA Synthetases in Escherichia coli. *FASEB Journal* **2019**, 33 (S1), 630.633-630.633, Meeting Abstract. DOI: 10.1096/fasebj.2019.33.1_supplement.630.3.
- (7) Goolsby, C.; Moradi, M. Overcoming the Embeddability Problem: A More Robust Calculation of Kinetic Information from Sparsely Sampled Molecular Dynamics Simulations. *Biophysical Journal* **2019**, 116 (3), A145-A145, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.802.

- (8) Greenlee, L. F.; Acharya, P.; Chen, J.; Manso, R. H. $\text{Fe}_x\text{Ni}_{1-x}\text{O}(\text{H})_y$ nanoparticles for alkaline electrocatalysis: Understanding the chemical structure of complex nanocatalysts. *Abstracts of Papers of the American Chemical Society* **2019**, 258, ENFL 018, Meeting Abstract.
- (9) Gulliver, J.; Zheng, N.; Jacobs, D. Illuminating science of photochemistry: The formation of disubstituted aniline derivatives via photoinitiation. *Abstracts of Papers of the American Chemical Society* **2019**, 257, ORGN 186, Meeting Abstract.
- (10) Immadisetty, K.; Shelton, R.; Moradi, M. Elucidating the Molecular Basis of pH-Triggered Activation of an Engineered Mechanosensitive Channel. *Biophysical Journal* **2019**, 116 (3), A379-A379, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.2058.
- (11) Kilyanek, S. M.; Tran, R.; DeNike, K. A. Substrate determined mechanism of deoxydehydration of polyols by a Mo(VI) catalyst. *Abstracts of Papers of the American Chemical Society* **2019**, 258, INOR 049, Meeting Abstract.
- (12) Kumar, V. G.; Agrawal, S.; Kumar, T. K. S.; Moradi, M. A Comprehensive Investigation of the Stabilization of Monomeric Hgf1 by Heparin Hexasaccharide using Microsecond-Level MD Simulations and Enhanced Sampling Techniques. *Biophysical Journal* **2019**, 116 (3), A190-A191, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.1056.
- (13) Lowe, J.; Coridan, R. Control of galvanic replacement reactions on electrodeposited cuprous oxide thin-films for rationally structured electrocatalytic interfaces. *Abstracts of Papers of the American Chemical Society* **2019**, 258, ENFL 329, Meeting Abstract.
- (14) Marr, K. A.; McKay, M. J.; Greathouse, D. V.; Koeppen, R. E. Lipid Optimization to Improve the Solid-State NMR Spectra from Membrane-Spanning Helices with Glutamic Acid. *Biophysical Journal* **2019**, 116 (3), A517-A517, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.2789.
- (15) McKay, M. J.; Greathouse, D. V.; Koeppen, R. E. Characterization of Alpha-Helix Distortions at a Membrane Surface and a Partial 3(10)-Helix by Solid-State NMR. *Biophysical Journal* **2019**, 116 (3), A517-A517, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.2788.
- (16) Mohale, M.; Howard, A.; Al-Ammeer, M. H. A.; Gundampati, R. K.; Kumar, T. K. S.; Heyes, C. Designing Fret Based Assays to Study the Binding of Fibroblast Growth Factor to Its Receptor. *Protein Science* **2019**, 28, 125-126, Meeting Abstract.
- (17) Mosleh, A.; Beyzavi, M. H.; Beitle, R. Exploring the mechanism of Suzuki and Stille coupling via recombinant peptide-directed Pd nanoparticles. *Abstracts of Papers of the American Chemical Society* **2019**, 258, CATL 319, Meeting Abstract.
- (18) Muhoza, D.; Adams, P. The Effects of a Small Molecule Inhibitor on Cdc42, Its Mutant and Its Interaction with Effector Proteins. *Protein Science* **2019**, 28, 169-169, Meeting Abstract.
- (19) Muhoza, D.; Montoya-Beltran, A.; Duverna, E.; Adams, P. D. Characterizing the Direct Influence of a Small Molecule on a RAS-Related Protein Interaction. *Biophysical Journal* **2019**, 116 (3), A479-A479, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.2589.

- (20) Niyonshuti, I. I.; Alqahtany, M.; Wang, Y.; Chen, J. Investigation of the effects on stability of silver nanoparticles. *Abstracts of Papers of the American Chemical Society* **2019**, 257, COLL 201, Meeting Abstract.
- (21) Nunn, B. E.; McKay, M. J.; Greathouse, D. V.; Koeppen, R. E. Influence of Charged Lipids on Glutamic Acid Containing Transmembrane Helices. *Biophysical Journal* **2019**, 116 (3), A516-A516, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.2783.
- (22) Ogden, D. S.; Kumar, V. G.; Moradi, M. Mechanistic Study of a Peptidase Containing ABC-Transporter, Employing Microsecond Level Molecular Dynamics Simulations and Enhanced Sampling Techniques. *Biophysical Journal* **2019**, 116 (3), A126-A127, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.703.
- (23) Polasa, A.; Ogden, D. S.; Moradi, M. Binding Free Energy Calculations of NMDA Glutamate Receptors. *Biophysical Journal* **2019**, 116 (3), A529-A529, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.2850.
- (24) Sharma, A.; Ozkizilcik, A.; Muresanu, D.; Moessler, H.; Nozari, A.; Castellani, R.; Lafuente, J. V.; Tian, R.; Sharma, H. S. Nano Wired Delivery of Antibodies to Amyloid Beta Peptide, Phosphorylated Tau and Serotonin Together with Cerebrolysin Induces Superior Neuroprotection Following Sleep Deprivation Induced Exacerbation of Alzheimer's Disease Pathophysiology. *Brain Injury* **2019**, 33 (S1), 62-62, Meeting Abstract. DOI: 10.1080/02699052.2019.1608749.
- (25) Sharma, H. S.; Ozkizilcik, A.; Muresanu, D.; Nozari, A.; Moessler, H.; Tian, R.; Lafuente, J. V.; Sharma, A. Concussive Head Injury Exacerbates Alzheimer's Disease Pathophysiology. Neuroprotection by Nanowired Delivery of Cerebrolysin with Neuronal Nitric Oxide Synthase Antibodies and Mesenchymal Stem Cells. *Brain Injury* **2019**, 33 (S1), 49-50, Meeting Abstract. DOI: 10.1080/02699052.2019.1608749.
- (26) Spence, S. K.; Hallett, L.; Kilyanek, S. M. Stability of molecular-electrode conjugates in acids and bases. *Abstracts of Papers of the American Chemical Society* **2019**, 258, INOR 147, Meeting Abstract.
- (27) Sustich, S. J.; Afrose, F.; Greathouse, D. V.; Koeppen, R. E. Helix Fraying and Orientation of a Transmembrane Peptide having a Long Hydrophobic Core and Anchored by Interfacial Arginine Residues. *Biophysical Journal* **2019**, 116 (3), A516-A516, Meeting Abstract. DOI: 10.1016/j.bpj.2018.11.2785.
- (28) Wang, Q.; Zheng, N. Difunctionalization of N-alkyl cyclobutyl and cyclopropyl amines via photoredox catalysis. *Abstracts of Papers of the American Chemical Society* **2019**, 258, ORGN 515, Meeting Abstract.
- (29) Wolinski, K.; Pulay, P. Natural representation of molecular polarizability for efficient QM/MM simulations. *Abstracts of Papers of the American Chemical Society* **2019**, 257, COMP 133, Meeting Abstract.

2018 (n=79)

- (1) Alismail, H.; Du, Y.; Zhou, J.; Tian, Z. R. Direct electrochemical differentiations of cancer and normal cells on the titanate. *Abstracts of Papers of the American Chemical Society* **2018**, 256, MEDI 200, Meeting Abstract.
- (2) Allison, N. Developing and implementing Tap OChem, an organic chemistry app, for small and large classroom use. *Abstracts of Papers of the American Chemical Society* **2018**, 255, CHED 2119, Meeting Abstract.

- (3) Baucom, D.; Hendersen, R.; Goforth, R.; Kight, A.; Sharma, P.; Gao, F.; Kumar, S.; Henry, R.; Heyes, C. Structural changes of chloroplast signal recognition particle proteins studied by single molecule FRET during vectorial protein targeting. *Abstracts of Papers of the American Chemical Society* **2018**, 255, BIOL 082, Meeting Abstract.
- (4) Beyzavi, H.; Mandal, D.; Strebl, M.; Neumann, C.; D'Amato, E.; Chen, J.; Hooker, J. M.; Ritter, T. Ruthenium complex mediated C-18F bond formation for Positron Emission Tomography (PET) tracer synthesis. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 024, Meeting Abstract.
- (5) Beyzavi, M. H.; Mandal, D.; Strebl, M.; Neumann, C.; D'Amato, E.; Chen, J.; Hooker, J. M.; Ritter, T. 18F-Deoxyfluorination of phenols via Ru pi-complexes. *Abstracts of Papers of the American Chemical Society* **2018**, 256, NUCL 051, Meeting Abstract.
- (6) Brown, M.; McKay, M. J.; Greathouse, D. V.; Andersen, O. S.; Koeppe, R. E. Gramicidin Subunits that Cross Membranes and form Ion Channels. *Biophysical Journal* **2018**, 114 (3), A454-A454, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.2509.
- (7) Chen, J. Engineering polydopamine-coated gold nanocages for biomedical applications. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 030, Meeting Abstract.
- (8) Cole, P.; Brandecker, K.; Kiaei, M.; Balachandran, K.; Tian, Z. Development of an injectable hydrogel as a nerve tissue scaffold for local, sustained release of neuroprotective agents. *Abstracts of Papers of the American Chemical Society* **2018**, 256, PMSE 521, Meeting Abstract.
- (9) Cole, P.; Malloy, M.; Roeder, L.; Tian, Z. Synthesis of zirconium or tantalum-doped titanate nanofibers for enhanced bone tissue engineering. *Abstracts of Papers of the American Chemical Society* **2018**, 256, INOR 470, Meeting Abstract.
- (10) Cole, P.; Brandecker, K.; Love, A.; Feimster, M.; Tomescu, A.; Hayden, M.; Balachandran, K.; Tian, R. Development of an injectable hydrogel as a nerve tissue scaffold for local, sustained release of neuroprotective agents. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 097, Meeting Abstract.
- (11) Cole, P.; Lowe, H.; Ravishankar, P.; Omolewu, A.; Stuecker, T. N.; Lewis, J. A.; Balachandran, K.; Tian, R. Anti-microbial alginate for wound healing applications. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 091, Meeting Abstract.
- (12) Cole, P.; Lowe, H.; Ravishankar, P.; Stuecker, T.; Lewis, J.; Balachandran, K.; Tian, Z. R. Anti-microbial alginate for wound healing applications. *Abstracts of Papers of the American Chemical Society* **2018**, 256, PMSE 522, Meeting Abstract.
- (13) Cole, P.; Puente, C.; Bielanin, J.; Chan, A.; Sandidge, B.; Omolewu, A.; Tian, R. Development of naturally-derived polymeric nanofibers as a multifunctional tissue scaffold. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 285, Meeting Abstract.
- (14) Coridan, R. All else being equal: Structuring in electrochemical materials for making solar fuels. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 069, Meeting Abstract.

- (15) DeNike, K. A.; Kilyanek, S. M. Computational investigation of the mechanism of metal-oxo catalyzed deoxydehydration. *Abstracts of Papers of the American Chemical Society* **2018**, 255, INOR 394, Meeting Abstract.
- (16) Diaz, A.; Liyanage, R.; Lay, J.; Stenken, J. Microdialysis sampling of quorum sensing during biofilm formation. *Abstracts of Papers of the American Chemical Society* **2018**, 255, ANYL 088, Meeting Abstract.
- (17) Doner, A.; Striegler, S. Synthesis and characterization of pentadentate ligands for the formation of binuclear complexes. *Abstracts of Papers of the American Chemical Society* **2018**, 255, INOR 372, Meeting Abstract.
- (18) Fan, C. Genetic code expansion in protein acetylation studies. *Abstracts of Papers of the American Chemical Society* **2018**, MWRM 410, Meeting Abstract.
- (19) Greathouse, D. V.; Koeppe, R. E. Ionization and Dynamic Properties of Single and Multiple Histidine Residues on a Transmembrane Helical Backbone. *Biophysical Journal* **2018**, 114 (3), A458-A458, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.2530.
- (20) Hallett, L.; Kilyanek, S. M. Surface immobilization of terpyridine compounds. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 267, Meeting Abstract.
- (21) Harkey, T.; Moradi, M.; Hettige, J. Microsecond-Level Simulations Reveal Membrane Protein Insertion Mechanism of Insertase YidC. *Biophysical Journal* **2018**, 114 (3), A242-A242, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.1348.
- (22) Heyes, C. D. Interfacial control of colloidal heteronanostructures to control single particle emission in Cd-based and CuIn-based chalcogenide quantum dots. *Abstracts of Papers of the American Chemical Society* **2018**, 255, PHYS 348, Meeting Abstract.
- (23) Jenkins, S.; Dings, R.; Chen, J. Y.; Griffin, R. Local-mapping and photothermal tumor treatment using galectin-1 targeting nanomaterials. *Abstracts of Papers of the American Chemical Society* **2018**, 255, COLL 594, Meeting Abstract.
- (24) Jenkins, S. V.; Chen, J.; Chen, S. Ligand effects on gold-copper nanorod catalyzed aqueous organic reactions. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 008, Meeting Abstract.
- (25) Khadka, P.; Haque, M.; Krishnamurthi, V. R.; Niyonshuti, I.; Chen, J. Y.; Wang, Y. Quantitative Investigations Reveal New Antimicrobial Mechanism of Silver Nanoparticles and Ions. *Biophysical Journal* **2018**, 114 (3), A690-A690, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.3723.
- (26) Kilyanek, S. M. Electrochemical hydrogen generation by molybdenum-oxo complexes. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 266, Meeting Abstract.
- (27) Kilyanek, S. Electrochemical hydrogen evolution catalyzed by molecular molybdenum dioxo complexes. *Abstracts of Papers of the American Chemical Society* **2018**, 256, INOR 035, Meeting Abstract.

- (28) Kilyanek, S. Visual impairments in the modern research environment. *Abstracts of Papers of the American Chemical Society* **2018**, 256, PROF 052, Meeting Abstract.
- (29) Kilyanek, S.; Tran, R. The influence of ligand environment on the deoxydehydration of polyols by early-metal oxo-complexes. *Abstracts of Papers of the American Chemical Society* **2018**, 255, INOR 1281, Meeting Abstract.
- (30) Kubik, J.; Moon, C.; Rivero, J.; Avery, J.; Canote, C.; Sonnentag, J.; Hoggard, V.; McNabb, D.; McIntosh, M. Two-step derivatization of fluconazole via radical fragmentation of a Breslow-type intermediate. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 255, Meeting Abstract.
- (31) Kubik, J.; Rivero, J.; Canote, C.; Sonnentag, J.; McNabb, D.; Avery, J.; McIntosh, M. Two-step derivatization of fluconazole via radical fragmentation of a Breslow-type intermediate. *Abstracts of Papers of the American Chemical Society* **2018**, 255, ORGN 175, Meeting Abstract.
- (32) Lipinski, K. A.; Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Influence of Saturation and Hydrophobic Length of Lipid Bilayers on Twin-Arginine Containing Helical Peptides. *Biophysical Journal* **2018**, 114 (3), A454-A454, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.2511.
- (33) Lotfi Marchoubeh, M.; Abrego Tello, M.; Pellegrino, R.; Hu, M.; Fritsch, I. Development of a novel neural probe: Steps toward simultaneous measurement and differentiation of catecholamines in their mixtures. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 035, Meeting Abstract.
- (34) Lowe, J.; Coridan, R. Physical and chemical applications of photodoping in electrodeposited cuprous oxide thin films. *Abstracts of Papers of the American Chemical Society* **2018**, 255, INOR 1158, Meeting Abstract.
- (35) May, A.; McIntosh, M. Fragmentation of the Breslow intermediate is a radical process. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 424, Meeting Abstract.
- (36) McIntosh, M. Low-temperature C-N and C-O sigma bond homolysis: Recent experimental and computational results. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 023, Meeting Abstract.
- (37) McIntosh, M. Oka fragmentation of the Breslow intermediate is a radical process. *Abstracts of Papers of the American Chemical Society* **2018**, 255, ORGN 020, Meeting Abstract.
- (38) McKay, M. J.; Greathouse, D. V.; Koeppe, R. E. Analyzing the Effects of Placing Central Arginine Residues within a Highly Dynamic Transmembrane Alpha-Helix. *Biophysical Journal* **2018**, 114 (3), A612-A612, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.3747.
- (39) Mohale, M.; Howard, A.; Crew, M.; Jayanthi, S.; Thallapuram, S.; Heyes, C. FRET based assays to study the binding of fibroblast growth factor to its receptor. *Abstracts of Papers of the American Chemical Society* **2018**, 255, BIOL 134, Meeting Abstract.
- (40) Montoya-Beltran, A.; Adams, P. Characterization of a small molecule's influence on a Ras-related protein-protein interaction. *Abstracts of Papers of the American Chemical Society* **2018**, 255, BIOL 052, Meeting Abstract.

- (41) Moradi, M.; Hettige, J. Lipid-Dependent Alternating Access Mechanism in ABC Exporters Revealed using Microsecond-Level Molecular Dynamics Simulations. *Biophysical Journal* **2018**, 114 (3), A148-A148, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.832.
- (42) Mosleh, A.; Beitle, R.; Beyzavi, M. H. Study of protein and peptide-directed nanoparticle synthesis for catalytic materials. *Abstracts of Papers of the American Chemical Society* **2018**, 256, CATL 317, Meeting Abstract.
- (43) Mosleh, A.; Tejada, R.; Greenlee, L.; Bedford, N.; Beyzavi, M. H.; Beitle, R. Effect of peptide/protein purity on bio-templated nanoparticle synthesis: Morphologies, properties, and ultimate cost. *Abstracts of Papers of the American Chemical Society* **2018**, 256, CATL 495, Meeting Abstract.
- (44) Muhoza, D.; Adams, P. Studying the Effects of a Small Molecule Inhibitor on a Ras-Related Protein. *Protein Science* **2018**, 27, 240-241, Meeting Abstract.
- (45) Muhoza, D.; Montoya-Beltran, A.; Adams, P. D. Characterizing the Direct Influence of a Small Molecule on a Ras-Related Protein Interaction. *Biophysical Journal* **2018**, 114 (3), A415-A415, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.2302.
- (46) Muresanu, D.; Sharma, A.; Lafuente, J.; Tian, Z.; Ozikzilcik, A.; Sharma, H. Repeated TiO₂-Nanowired Delivery of Cerebrolysin Reduces Pathophysiology of Blast Brain Injury. *Journal of Head Trauma Rehabilitation* **2018**, 33 (3), E75-E76, Meeting Abstract. DOI: 10.1097/htr.0000000000000401.
- (47) Nannapaneni, D.; Dormi, S.; Rivero, J.; McIntosh, M. Thermal azole based Claisen rearrangements. *Abstracts of Papers of the American Chemical Society* **2018**, 255, ORGN 176, Meeting Abstract.
- (48) Nepal, S.; Yazdani, A.; Chevrier, V.; Kumar, P. Dynamics of Growth, Cell Division, and Phenotypic Switching Of escherichia Coliat Elevated Concentration of Magnesium Sulfate. *Biophysical Journal* **2018**, 114 (3), A329-A329, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.1843.
- (49) Nguyen, A.; Heyes, C. Synthetic control over structural and optical properties of Cu(Zn) InS₂/ZnS quantum dots studied at the single particle level. *Abstracts of Papers of the American Chemical Society* **2018**, 255, COLL 188, Meeting Abstract.
- (50) Nguyen, A.; Heyes, C. D.; Baucom, D.; Gao, F. Reducing blinking in small spherical CuInS₂/ZnS quantum dots via non-injection synthesis: A single particle subpopulation analysis. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 244, Meeting Abstract.
- (51) Orizu, I.; Striegler, S. Designing galactonoamidines as inhibitors of alpha-galactosidases. *Abstracts of Papers of the American Chemical Society* **2018**, 256, CARB 023, Meeting Abstract.
- (52) Orizu, I.; Striegler, S. Synthesis of bulky galactonoamidines for the inhibition of galactosidases. *Abstracts of Papers of the American Chemical Society* **2018**, 256, ORGN 385, Meeting Abstract.
- (53) Pickens, J. B.; Striegler, S. Probing interactions of beta-galactosidases with galactonoamidines. *Abstracts of Papers of the American Chemical Society* **2018**, 256, BIOL 081, Meeting Abstract.

- (54) Pickens, J. B.; Striegler, S. Probing of b-galactosidases with galactonoamidines reveals importance of active site loops. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 137, Meeting Abstract.
- (55) Pickens, J.; Striegler, S. Study of galactonoamidines as transition state analogs of glycosidases. *Abstracts of Papers of the American Chemical Society* **2018**, 256, CARB 107, Meeting Abstract.
- (56) Robinson, C.; Mohale, M.; Baucom, D.; Nguyen, A.; Gundampati, R. K.; Al-Ameer, M. H.; Thallapuram, S. K.; Heyes, C. D. Bioconjugation of CuInS₂/ZnS quantum dots to FGF and bioimaging their interactions with FGFR. *Abstracts of Papers of the American Chemical Society* **2018**, 255, COLL 200, Meeting Abstract.
- (57) Rusinova, R.; Koeppe, R. E.; Andersen, O. S. Dissecting Drug Physico-Chemical Profiles as They Relate to their Bilayer Modifying Potency. *Biophysical Journal* **2018**, 114 (3), A266-A267, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.1543.
- (58) Sahib, S. I.; Tian, R.; Demydov, D.; Broadbent, N. Low-cost, low-energy method for rapidly nitriding titanium. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 298, Meeting Abstract.
- (59) Sharma, A.; Muresanu, D.; Lafuente, J.; Tian, Z.; Ozkizilcik, A.; Sharma, H. Nanodelivery of Cerebrolysin With 5-HT6 Receptor Antagonist Induces Superior Neuroprotective Effects Following Concussive Head Injury Induced Exacerbation of Brain Pathology in Sleep Deprivation. *Journal of Head Trauma Rehabilitation* **2018**, 33 (3), E76-E76, Meeting Abstract. DOI: 10.1097/htr.0000000000000401.
- (60) Sharma, B.; Striegler, S. Biomimetic macromolecular catalysts via miniemulsion polymerization. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 029, Meeting Abstract.
- (61) Sharma, B.; Striegler, S. Glycoside cleavage via crosslinked microgel catalysts. *Abstracts of Papers of the American Chemical Society* **2018**, 256, CARB 2424, Meeting Abstract.
- (62) Sharma, B.; Striegler, S. Microgel matrix effect (MME): Influence of crosslinking on catalytic behavior. *Abstracts of Papers of the American Chemical Society* **2018**, 256, POLY 377, Meeting Abstract.
- (63) Sharma, H.; Muresanu, D.; Lafuente, J.; Nozari, A.; Ozkizilcik, A.; Tian, R.; Sharma, A. Pathophysiology of Concussive Head Injury is Exacerbated High Altitude. Neuroprotective Effects of TiO₂ Nanodelivery of Cerebrolysin. *Journal of Head Trauma Rehabilitation* **2018**, 33 (3), E72-E72, Meeting Abstract. DOI: 10.1097/htr.0000000000000401.
- (64) Sikes, J.; Niyonshuti, I.; Magness, M.; Chen, J.; Fritsch, I. Investigating physical and chemical properties of individual silver nanoparticles through electrochemical impacts. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 246, Meeting Abstract.
- (65) Snider, T.; Stenken, J. Improving relative recovery of cytokines using cibacron blue. *Abstracts of Papers of the American Chemical Society* **2018**, 255, ANYL 113, Meeting Abstract.
- (66) Striegler, S. Probing galactonoamidine scaffolds toward potent glycosidase inhibition. *Abstracts of Papers of the American Chemical Society* **2018**, 256, ORGN 198, Meeting Abstract.

- (67) Sustich, S.; Afrose, F.; Greathouse, D. V.; Koeppen, R. E. Detection of Helix Fraying of a Transmembrane Peptide with Two Interfacial Arginine Residues. *Biophysical Journal* **2018**, 114 (3), A458-A458, Meeting Abstract. DOI: 10.1016/j.bpj.2017.11.2529.
- (68) Tian, Z. R. Crossing-link flammable graphene oxides into inflammable, versatile 3D-scaffolds and membranes. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 047, Meeting Abstract.
- (69) Tian, Z. R. Optically engineered and hierarchically tailored light-concentrating photocatalysts. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 068, Meeting Abstract.
- (70) Tian, Z.; Alismail, H.; Du, Y.; Zhou, J.; Koster, J.; Cole, P.; Mantooth, L. Tuning the scaffolding bionanofiber's structure and surface for electrochemically sensing cancer and normal cells. *Abstracts of Papers of the American Chemical Society* **2018**, 256, COLL 703, Meeting Abstract.
- (71) Tian, Z.; Hua, L. Mechanically tunable inter-bonding, assembly and macrostructures of nanoparticles in biominerals. *Abstracts of Papers of the American Chemical Society* **2018**, 256, COLL 331, Meeting Abstract.
- (72) Tian, Z.; Turgut, H.; Ozkizilcik, A. Flammable graphene oxides crossing-linked into inflammable, versatile 3D-scaffolds and membranes. *Abstracts of Papers of the American Chemical Society* **2018**, 256, PMSE 637, Meeting Abstract.
- (73) Tran, R.; Kilyanek, S. M. Deoxydehydration of polyols by a dioxo-molybdenum complex. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 147, Meeting Abstract.
- (74) Tran, R.; Kilyanek, S. M. Novel 5-coordinate and 6-coordinate low-valent molybdenum(VI)-dioxo complexes exhibiting deoxydehydration activity. *Abstracts of Papers of the American Chemical Society* **2018**, 255, INOR 389, Meeting Abstract.
- (75) Wang, Q.; Zheng, N. Photocatalyzed cascade for synthesis of the tetracyclic core of akuamiline alkaloids. *Abstracts of Papers of the American Chemical Society* **2018**, 256, ORGN 483, Meeting Abstract.
- (76) Whaley, M.; Sharma, B.; Striegler, S. Designing matrix effects in polyacrylate microgels. *Abstracts of Papers of the American Chemical Society* **2018**, 256, POLY 410, Meeting Abstract.
- (77) Yang, T. H.; Fang, L. L.; Sanders, S.; Jayanthi, S.; Rajan, G.; Podicheti, R.; Kumar, T. K. S.; Mockaitis, K.; Medina-Bolivar, F. Peanut Hairy Roots: A Bioproduction Platform for Elucidating the Biosynthesis of Prenylated Stilbenoids. *In Vitro Cellular & Developmental Biology-Plant* **2018**, 54 (4), 487-487, Meeting Abstract. DOI: 10.1007/s11627-018-9913-2.
- (78) Zhang, L.; Alismail, H.; Hu, Z.; Cole, P.; Tian, R. Synthesis and characterization of potassium titanate nanowire-entangled smart bioscaffolds. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 108, Meeting Abstract.
- (79) Zheng, N. Development of new chemistries of photogenerated distonic radical cations: From mechanistic investigations to synthetic applications. *Abstracts of Papers of the American Chemical Society* **2018**, SWRM 050, Meeting Abstract.

2017 (n=55)

- (1) Afrose, F.; Greathouse, D. V.; Koeppen, R. E. Influence of Paired Histidine Residues on Transmembrane Helix Orientation and Dynamics. *Biophysical Journal* **2017**, *112* (3), A528-A528, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.2856.
- (2) Bauer, R.; Janowska, K.; Tanaka, K.; Matsushita, O.; Sakon, J. Activation and binding mechanisms of the tandem collagen-binding domain of ColG collagenase. *FASEB Journal* **2017**, *31*, 1, Meeting Abstract.
- (3) Benton, M.; Moradi, M. Modeling the atomistic structure and dynamics of the chloroplast signal recognition particles. *Abstracts of Papers of the American Chemical Society* **2017**, *254*, COMP 234, Meeting Abstract.
- (4) Caviness, P. C.; Koide, T.; Matsushita, O.; Sakon, J. Using Small Angle X-ray Scattering to determine the role of Poly-cystic kidney disease-like domains in Clostridium histolyticum. *FASEB Journal* **2017**, *31*, 1, Meeting Abstract.
- (5) Chen, J. Y. Seeded growth of copper-platinum-ruthenium multi-metal nanostructures as active electrocatalysts. *Abstracts of Papers of the American Chemical Society* **2017**, *254*, COLL 117, Meeting Abstract.
- (6) Chen, J. Introduction of galvanic replacement reactions at the nanoscale to undergraduate students: Synthesis of hollow metal nanostructures. *Abstracts of Papers of the American Chemical Society* **2017**, *253*, CHED 2053, Meeting Abstract.
- (7) Chen, J. Seeded growth of catalytically active copper-based nanostructures. *Abstracts of Papers of the American Chemical Society* **2017**, *253*, COLL 016, Meeting Abstract.
- (8) Coridan, R. Bubble residence during water splitting reactions at structured semiconductor-electrocatalyst interfaces. *Abstracts of Papers of the American Chemical Society* **2017**, MWRM 169, Meeting Abstract.
- (9) Coridan, R.; Lowe, J. M. Physical and chemical applications of photodoping in electrodeposited cuprous oxide thin films. *Abstracts of Papers of the American Chemical Society* **2017**, MWRM 319, Meeting Abstract.
- (10) Greathouse, D. V.; Martfeld, A. N.; Thibado, J. K.; Koeppen, R. E. The ionization properties of histidine in lipid bilayers. *European Biophysics Journal with Biophysics Letters* **2017**, *46*, S385-S385, Meeting Abstract.
- (11) Herrera, A. P.; Afrose, F.; Greathouse, D.; Koeppen, R. Detection of Helix Fraying in Transmembrane Helices with Interfacial Histidine Residues. *Biophysical Journal* **2017**, *112* (3), A230-A230, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.1263.
- (12) Heyes, C. D. Mechanistic insights into multiple blinking states in small core-shell and core-multishell quantum dots. *Abstracts of Papers of the American Chemical Society* **2017**, *253*, COLL 519, Meeting Abstract.
- (13) Hirsch, M.; Zong, G. H.; Mondrik, C.; Hu, Z. J.; Shi, W. Design, synthesis and biological evaluation of fucose-truncated monosaccharide analogues of ipomoeassin F. *Abstracts of Papers of the American Chemical Society* **2017**, *254*, ORGN 403, Meeting Abstract.

- (14) Jenkins, S.; Nedosekin, D.; Dings, R.; Chen, J. Y.; Griffin, R. Galectin-1-based tumor-targeting for gold nanostructure mediated theranostics. *Abstracts of Papers of the American Chemical Society* **2017**, 253, COLL 675, Meeting Abstract.
- (15) Kilyanek, S. M.; Tran, R.; DeNike, K. A. Mechanistic studies of the deoxydehydration of polyols by group VI transition metal catalysts. *Abstracts of Papers of the American Chemical Society* **2017**, 253, INOR 1395, Meeting Abstract.
- (16) Klucher, J.; Stenken, J. Enzyme kinetics studies to guide mathematical modeling of microdialysis sampling to predict in situ biochemistry. *Abstracts of Papers of the American Chemical Society* **2017**, 253, ANYL 142, Meeting Abstract.
- (17) Knobbe, K.; Rajagopalan, V.; Martfeld, A.; Greathouse, D.; Koeppe, R. Solid-State NMR Investigations of Transmembrane Helix Interactions. *Biophysical Journal* **2017**, 112 (3), A528-A528, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.2855.
- (18) Kougl, K.; Stenken, J. A. Quantification of quorum sensing components produced by bacterial biofilms. *Abstracts of Papers of the American Chemical Society* **2017**, 253, CHED 382, Meeting Abstract.
- (19) Lipinski, K. A.; Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Response of GWALP23 Transmembrane Peptides to Incorporation of Specific Pairs of Buried Charged Arginine Residues. *Biophysical Journal* **2017**, 112 (3), A528-A528, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.2858.
- (20) Lowe, J. M.; Coridan, R. Photopatterned noble metal functional surfaces via galvanic replacement reactions on Cu₂O thin films. *Abstracts of Papers of the American Chemical Society* **2017**, MWRM 500, Meeting Abstract.
- (21) May, A.; Zong, G. H.; Barber, E.; Shi, W. Synthesis of ipomoeassin F analogs with a tail modified aglycone. *Abstracts of Papers of the American Chemical Society* **2017**, 254, ORGN 657, Meeting Abstract.
- (22) McIntosh, M. Radical chemistry of the Breslow intermediate. *Abstracts of Papers of the American Chemical Society* **2017**, MWRM 490, Meeting Abstract.
- (23) McKay, M. J.; Martfeld, A. N.; De Angelis, A. A.; Opella, S. J.; Greathouse, D. V.; Koeppe, R. E. Interfacial Tryptophan Residues Govern Transmembrane Helix Dynamics. *Biophysical Journal* **2017**, 112 (3), A528-A528, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.2857.
- (24) Mehrabi, H.; Coridan, R. The role of surface-wettability in electrochemical reactions involving gas-phase reactants or products. *Abstracts of Papers of the American Chemical Society* **2017**, MWRM 517, Meeting Abstract.
- (25) Moradi, M.; Immadisetty, K. C.; Hettige, J. Couplings between Local and Global Conformational Changes in Proton-Coupled Oligopeptide Transporters. *Biophysical Journal* **2017**, 112 (3), A448-A448, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.2404.
- (26) Moudy, M. G.; Stites, W. Investigation of Methionine Sulfoxide Formation as a Regulator of Proteolysis. *Biophysical Journal* **2017**, 112 (3), A202-A202, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.1117.

- (27) Muhoza, D.; Montoya-Beltran, A.; Adams, P. D. Biochemical and Biophysical Characterization of a Small Molecule Interaction with the Ras-Related Protein Cdc42. *Biophysical Journal* **2017**, *112* (3), A351-A351, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.1905.
- (28) Muresanu, D. F.; Sharma, H. S.; Lafuente, J. V.; Nozari, A.; Patnaik, R.; Tian, Z. R.; Ozkizilcik, A.; Moessler, H.; Sharma, A. Hypertension Associated With Silica Dust Intoxication Aggravates Brain Pathology Following Traumatic Brain Injury: New Roles of Neurotrophic Factors. *Journal of Head Trauma Rehabilitation* **2017**, *32* (6), E68-E69, Meeting Abstract. DOI: 10.1097/htr.0000000000000241.
- (29) Muresanu, D.; Sharma, H. S.; Nozari, A.; Lafuente, J. V.; Tian, R.; Ozkizilcik, A.; Sharma, A. Traumatic brain injury in diabetic and hypertensive rats exacerbates brain pathology and functional outcome-role of neurotrophic factors and nanomedicine. *Brain Injury* **2017**, *31* (6-7), 842-842, Meeting Abstract. DOI: 10.1080/02699052.2017.1312145.
- (30) Nguyen, A.; Heyes, C. Effect of ZnS on structural and optical properties of CuInS₂ quantum dots. *Abstracts of Papers of the American Chemical Society* **2017**, *253*, COLL 189, Meeting Abstract.
- (31) Norman, M. A.; Perez, W.; Coridan, R. Hierarchically structured electrodes prepared from selective atomic layer deposition in self-assembled, composite colloidal films. *Abstracts of Papers of the American Chemical Society* **2017**, MWRM 510, Meeting Abstract.
- (32) Pulay, P. Award Address (ACS Award in Theoretical Chemistry sponsored by the ACS Division of Physical Chemistry). Molecular properties from quantum mechanical calculations 1967-2017: Synergy, successes, and challenges. *Abstracts of Papers of the American Chemical Society* **2017**, *253*, PHYS 183, Meeting Abstract.
- (33) Pulay, P.; Fogarasi, G. Optimized van der Waals parameters for quantum/molecular mechanics calculations. *Abstracts of Papers of the American Chemical Society* **2017**, *254*, COMP 020, Meeting Abstract.
- (34) Qassab, A.; Liyanage, R.; Stites, W. Methionine Sulfoxide Formation by Cigarette Smoke is Associated with the Degradation of Plasma Proteins. *Biophysical Journal* **2017**, *112* (3), A48-A49, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.301.
- (35) Robinson, C.; Mohale, M.; Nguyen, A.; Heyes, C. D. Water solubilization of CuInS₂/ZnS QDs and bioconjugation to fibroblast growth factor studied by FRET. *Abstracts of Papers of the American Chemical Society* **2017**, *253*, PHYS 503, Meeting Abstract.
- (36) Ruth, C. E.; Sakon, J. Multi-Domain Dynamic Studies of Calcium Bound Polycystic Kidney Disease-Like and Collagen Binding Domains. *FASEB Journal* **2017**, *31*, 1, Meeting Abstract.
- (37) Schichtl, Z.; Coridan, R. Characterizing the structural overpotentials induced by bubble evolution during water electrolysis on spatially-distributed electrocatalyst-semiconductor interfaces. *Abstracts of Papers of the American Chemical Society* **2017**, MWRM 466, Meeting Abstract.
- (38) Sharma, A.; Muresanu, D. F.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Ozkizilcik, A.; Moessler, H.; Sharma, H. S. Spinal Cord Injury at Hot Environment Exacerbates Blood-spinal Cord Barrier Disruption, Edema Formation and Cellular Damages. Effective Treatment With a Multimodal Drug Cerebrolysin. *Journal of Head Trauma Rehabilitation* **2017**, *32* (6), E68-E68, Meeting Abstract. DOI: 10.1097/htr.0000000000000241.

- (39) Sharma, A.; Muresanu, D.; Nozari, A.; Lafuente, J. V.; Tian, R.; Ozkizilcik, A.; Sharma, H. S. Concussive head injury exacerbates sleep deprivation-induced brain pathology. Co-administration of nanowired antioxidant H-290/51 and serotonin 5-HT₆ receptor antagonist SB-399885. *Brain Injury* **2017**, *31* (6-7), 817-817, Meeting Abstract. DOI: 10.1080/02699052.2017.1312145.
- (40) Sharma, H. S.; Muresanu, D. F.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Ozkizilcik, A.; Moessler, H.; Sharma, A. Nanowired Delivery of Cerebrolysin and Mesenchymal Stem Cells Potentiate Neuroprotection Following Concussive Head Injury. *Journal of Head Trauma Rehabilitation* **2017**, *32* (6), E67-E68, Meeting Abstract. DOI: 10.1097/htr.0000000000000241.
- (41) Sharma, H. S.; Muresanu, D.; Lafuente, J. V.; Nozari, A.; Tian, R.; Ozkizilcik, A.; Sharma, A. Mild traumatic brain injury exacerbates Alzheimer's disease brain pathology: Neuroprotective effects of nanowired mesenchymal cells and cerebrolysin. *Brain Injury* **2017**, *31* (6-7), 811-812, Meeting Abstract. DOI: 10.1080/02699052.2017.1312145.
- (42) Shi, W. Unique natural macrocycles of ipomoeassin glycoresins with potent cytotoxicity. *Abstracts of Papers of the American Chemical Society* **2017**, 253, Meeting Abstract.
- (43) Stenken, J. A. Developing microdialysis sampling as an in situ analysis tool for quorum sensing from biofilms. *Abstracts of Papers of the American Chemical Society* **2017**, MWRM 278, Meeting Abstract.
- (44) Tabari, S. H.; Hettige, J.; Moradi, M. All-Atom Molecular Dynamics Simulation of Stealth Liposomes. *Biophysical Journal* **2017**, *112* (3), A75-A75, Meeting Abstract. DOI: 10.1016/j.bpj.2016.11.450.
- (45) Thapa, R.; Kilyanek, S. M. Macroyclic bidentate N-heterocyclic carbene ligands for group 10 metals for catalysis. *Abstracts of Papers of the American Chemical Society* **2017**, 254, INOR 232, Meeting Abstract.
- (46) Tran, R.; Kilyanek, S. M. Studies of a low-valent Molybdenum(VI)-dioxo complex as a deoxydehydration catalyst. *Abstracts of Papers of the American Chemical Society* **2017**, 253, INOR 894, Meeting Abstract.
- (47) Trivedi, V.; Jones, T.; Walker, R.; Gundampati, R. K.; Kumar, T. S. Phosphorylation of Anabaena Sensory Rhodopsin Transducer: a Putative Signaling State in Sensory Rhodopsin Mediated Protein-Protein Cross Talk. *Protein Science* **2017**, *26*, 155-156, Meeting Abstract.
- (48) Vasicek, T.; Vaz, L.; Stenken, J. A. Thermoresponsive nanoparticle agglomeration reversibility in salt: Dependence on graft density. *Abstracts of Papers of the American Chemical Society* **2017**, 253, ANYL 177, Meeting Abstract.
- (49) Wang, F. Deviation of the surface tension of water suggests the possible emergence of a new form of liquid upon supercooling. *Abstracts of Papers of the American Chemical Society* **2017**, 253, COMP 094, Meeting Abstract.
- (50) Wang, F.; Li, J. Modeling hydration of simple ions on the MP2 potential energy surface with molecular mechanics force fields. *Abstracts of Papers of the American Chemical Society* **2017**, SERMACS 181, Meeting Abstract.

- (51) Wang, F.; Li, J. MP2 hydration free energies of 20 different salts show excellent agreement with experiments. *Abstracts of Papers of the American Chemical Society* **2017**, 254, COMP 398, Meeting Abstract.
- (52) Wang, Q.; Zheng, N. Formal 2+2+2 photoredox synthesis of naphthalene derivatives using aniline as traceless directing group. *Abstracts of Papers of the American Chemical Society* **2017**, 253, ORGN 166, Meeting Abstract.
- (53) Whisenhunt, L.; Zong, G. H.; Hu, Z. J.; Shi, W. Late-stage modification of tigloyl moiety to ipomoeassin F to enable SAR studies of the natural product. *Abstracts of Papers of the American Chemical Society* **2017**, 254, MEDI 338, Meeting Abstract.
- (54) Wood, M. R.; Vasicek, T.; Alkhatib, K.; Diaz-Perez, A.; Pysz, P.; Stenken, J. A. Detection and quantification of N-acyl-L-homoserine lactones from *Vibrio Harveyi* culture. *Abstracts of Papers of the American Chemical Society* **2017**, MWRM 106, Meeting Abstract.
- (55) Zong, G. H.; Hu, Z. J.; Sun, X. W.; Bhakta, R.; Whisenhunt, L.; Shi, W. Bioisosteric 5-oxa/aza analogues of ipomoeassin F uncover an H-bonding activity cliff and more. *Abstracts of Papers of the American Chemical Society* **2017**, 254, BIOL 120, Meeting Abstract.

2016 (n=49)

- (1) Afrose, F.; Greathouse, D. V.; Koeppe, R. E. Solid-State NMR Investigations of a Transmembrane Peptide having Interfacial Histidine Residues. *Biophysical Journal* **2016**, 110 (3), A251-A251, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.1382.
- (2) Allison, N. T.; Allison, J. T. Development and use of Tap OChem, an organic chemistry animation application for the classroom. *Abstracts of Papers of the American Chemical Society* **2016**, 251, CHED 1969, Meeting Abstract.
- (3) Bajwa, P.; Gao, F.; Heyes, C. D. On-grey-off transitions in core/multi-shell quantum dots. *Abstracts of Papers of the American Chemical Society* **2016**, 251, PHYS 481, Meeting Abstract.
- (4) Baldwin, L.; Zheng, N. Visible-light-mediated oxidation of hydroxylamines: A new pathway to indole synthesis. *Abstracts of Papers of the American Chemical Society* **2016**, 251, ORGN 692, Meeting Abstract.
- (5) Barber, E.; Shi, W.; Zong, G. Establishing a route for the synthesis of ipomoeassin F analogs containing a modified aglycone. *Abstracts, 28th International Carbohydrate Symposium, New Orleans, LA, United States, July 17-21, 2016* **2016**, ICS 101, Meeting Abstract.
- (6) Calaway, M. G.; Zheng, N. Carbon-carbon bond formation between cyclobutylanalines and tetrahydrofuran using a titanium based photocatalyst. *Abstracts of Papers of the American Chemical Society* **2016**, 251, ORGN 716, Meeting Abstract.

- (7) Davis, J. B.; Kumar, T. K. S.; Jayanthi, S. Engineering the Structure of Human Acidic Fibroblast Growth Factor through Site Directed Mutagenesis for Increased Protein Stability. *Biophysical Journal* **2016**, 110 (3), A391-A391, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.2112.
- (8) Goodnow, C.; Kilyanek, S. M. Electrochemical reduction of group VI metal-dioxo complexes. *Abstracts of Papers of the American Chemical Society* **2016**, MWRM 188, Meeting Abstract.
- (9) Halder, N.; Paul, D. Oxygen generation for oxidase-enzyme microelectrode arrays. *Abstracts of Papers of the American Chemical Society* **2016**, 252, ANYL 110, Meeting Abstract.
- (10) Heyes, C. D. Strategies for reducing blinking in quantum dots while maintaining as small a size as possible: Insights from multiparametric Studies. *Abstracts of Papers of the American Chemical Society* **2016**, 251, PHYS 677, Meeting Abstract.
- (11) Hu, Z.; Zong, G.; Aljewari, H.; Zhou, J.; Du, Y.; Shi, W. Exploring the mode of action of ipomoeassin natural glycoresins. *Abstracts, 28th International Carbohydrate Symposium, New Orleans, LA, United States, July 17-21, 2016* **2016**, ICS 282, Meeting Abstract.
- (12) Huntington, T.; Perry, D.; Chen, J. Surface enhanced Raman spectroscopy on optimized AgAu nanoparticles. *Abstracts of Papers of the American Chemical Society* **2016**, 251, CHED 1210, Meeting Abstract.
- (13) James, A. N.; Nguyen, T.; Zheng, N. Improving photocatalytic activity by appending a DABCO ring and a quinone to ruthenium polypyridyl complex. *Abstracts of Papers of the American Chemical Society* **2016**, 251, ORGN 188, Meeting Abstract.
- (14) Jenkins, S.; Dings, R.; Chen, J. Y.; Griffin, R.; Nedosekin, D. Targeting polydopamine-coated gold nanocages to tumor cells using the anti-angiogenic peptide anginex. *Abstracts of Papers of the American Chemical Society* **2016**, 251, COLL 106, Meeting Abstract.
- (15) Jenkins, S.; Meeker, D.; Miller, E.; Smeltzer, M.; Chen, J. Y. Synergistic photothermal and antibiotic eradication of *S. aureus* biofilms using targeted, drug-loaded nanoparticle. *Abstracts of Papers of the American Chemical Society* **2016**, 251, COLL 300, Meeting Abstract.
- (16) Kachel, B.; Jayanthi, S.; Henderson, R.; Kumar, T. K. S. Acquisition of Multidimensional NMR Data on GST-Fused Proteins. *Biophysical Journal* **2016**, 110 (3), A154-A154, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.864.
- (17) Kilyanek, S. M. Deoxydehydration of diols by d0 early-metal-oxo complexes. *Abstracts of Papers of the American Chemical Society* **2016**, MWRM 302, Meeting Abstract.
- (18) Kim, A. H.; Greathouse, D. V. Lactoferricin Peptides: The Importance of Methyl-Tryptophan and Glutamine for Structure and Activity. *Biophysical Journal* **2016**, 110 (3), A252-A252, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.1387.
- (19) Lotfi-Marchoubeh, M.; Hu, M.; Abrego, M.; Fritsch, I. Spatiotemporally-distributed electrochemical signals at microelectrode arrays to differentially detect catecholamines. *Abstracts of Papers of the American Chemical Society* **2016**, MWRM 042, Meeting Abstract.

- (20) Makkar, S. K.; Liyanage, R.; Lay, J. O.; Rath, N. C. Comparative proteomic analysis of chicken macrophages stimulated with Salmonella Lipopolysaccharide (LPS) and Monosodium Urate (MSU) Crystals. *Journal of Immunology* **2016**, *196* (S1), Meeting Abstract. DOI: 10.4049/jimmunol.196.supp.126.32.
- (21) Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Use of Transmembrane Peptides to Understand Ionization Properties of Histidine Residues in Lipid Bilayers. *Biophysical Journal* **2016**, *110* (3), A252-A252, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.1384.
- (22) McIntosh, M. Radical chemistry of the Breslow intermediate. *Abstracts of Papers of the American Chemical Society* **2016**, *252*, ORGN 659, Meeting Abstract.
- (23) McKay, M. J.; Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Monitoring the Consequences of Relocating the Tryptophan Anchors on Transmembrane Peptide Dynamics and Alignment. *Biophysical Journal* **2016**, *110* (3), A75-A75, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.472.
- (24) Moldenhauer, J. C.; Meier, M.; Paul, D. Rapid determination of diffusion coefficients using electrochemical time of flight. *Abstracts of Papers of the American Chemical Society* **2016**, MWRM 398, Meeting Abstract.
- (25) Moradi, M. A Riemannian Framework for Tackling Large-Scale Conformational Changes of Proteins using All-ATOM Molecular Dynamics Simulations. *Biophysical Journal* **2016**, *110* (3), A643-A643, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.3439.
- (26) Moradi, M. Conformational free energy landscape of inward- and outward-facing states of peptidase-containing ATP-binding cassette transporter PCAT1. *Abstracts of Papers of the American Chemical Society* **2016**, *251*, BIOL 231, Meeting Abstract.
- (27) Mortazavi, A.; Rajagopalan, V.; Greathouse, D. V.; Koeppe, R. E. Helix Fraying May Stabilize Transmembrane Alpha Helices. *Biophysical Journal* **2016**, *110* (3), A253-A253, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.1391.
- (28) Muresanu, D. F.; Sharma, A.; Patnaik, R.; Nozari, A.; Tian, Z. R.; Ozkizilcik, A.; Moessler, H.; Sharma, H. S. Nanodelivery of cerebrolysin induces profound neuroprotection in heat stroke following chronic hypertension in combination with carbon nanoparticles induced exacerbation of brain damage. *Brain Injury* **2016**, *30* (5-6), 506-507, Meeting Abstract.
- (29) Nguyen, A.; Robinson, C.; Heyes, C. Optical and structural characterization of stoichiometric and indium-rich CuInS₂/ZnS colloidal quantum dots. *Abstracts of Papers of the American Chemical Society* **2016**, *251*, COLL 234, Meeting Abstract.
- (30) Patrick, M.; Derden, Z.; Paul, D. In situ recalibration of biofouled polymer-coated amperometric oxygen microelectrode array. *Abstracts of Papers of the American Chemical Society* **2016**, *252*, ANYL 108, Meeting Abstract.
- (31) Pickens, J. B.; Striegler, S. Examination of active sites of β -galactosidases by interactions with galactonoamidine inhibitors. *Abstracts, 28th International Carbohydrate Symposium, New Orleans, LA, United States, July 17-21, 2016* **2016**, ICS 334, Meeting Abstract.

- (32) Rajagopalan, V.; Greathouse, D. V.; Koeppen, R. E. Varied Approaches to the Ionization Behavior of Specific Glu Residues that Face the Lipids in Transmembrane Helices. *Biophysical Journal* **2016**, *110* (3), A252-A252, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.1385.
- (33) Rusinova, R.; Koeppen, R. E.; Andersen, O. S. A General Mechanism for Drug Promiscuity: Studies with Amiodarone and Other Antiarrhythmics. *Biophysical Journal* **2016**, *110* (3), A80-A80, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.492.
- (34) Sharma, A.; Muresanu, D.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Moessler, H.; Sharma, H. S. Cold environment exacerbates brain pathology and oxidative stress following traumatic brain injuries. Potential therapeutic effects of nanowired cerebrolysin. *Brain Injury* **2016**, *30* (5-6), 506-506, Meeting Abstract.
- (35) Sharma, H.; Muresanu, D.; Lafuente, J.; Patnaik, R.; Moessler, H.; Tian, Z. R.; Sharma, A. Nanodrug delivery of a multimodal novel drug cerebrolysin reduces engineered nanoparticles induced aggravation of heat stroke induced ubiquitin expression and brain pathology. *Brain Injury* **2016**, *30* (5-6), 505-506, Meeting Abstract.
- (36) Shi, W.; Zong, G.; Hu, Z.; Aljewari, H.; Zhou, J.; Du, Y. Understanding the functional mechanism of ipomoeassin natural glycoresins. *Abstracts, 28th International Carbohydrate Symposium, New Orleans, LA, United States, July 17-21, 2016* **2016**, ICS 163, Meeting Abstract.
- (37) Silva-Nash, J.; Millett, F.; Scharlau, M. Regulation of the Reaction between Cytochrome c and Cytochrome Oxidase. *Biophysical Journal* **2016**, *110* (3), A315-A315, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.1691.
- (38) Smith, J.; Lay, J.; Bluhm, B. A sensitive method for quantifying cercosporin, a fungal-derived secondary metabolite, in plant tissue. *Phytopathology* **2016**, *106* (12), 145-145, Meeting Abstract. DOI: 10.1094/phyto-106-12-s4.1.
- (39) Stebbins, N.; Howard, L.; Prior, R.; Brownmiller, C.; Liyanage, R.; Lay, J.; Yang, X.; Qian, S. Ascorbic acid-catalyzed degradation of cyanidin- and malvidin-3-O-beta-glucoside: Proposed mechanism and identification of novel hydroxylated products. *Abstracts of Papers of the American Chemical Society* **2016**, *252*, AGFD 203, Meeting Abstract.
- (40) Striegler, S.; Fan, Q.-H.; Pickens, J. Galactonoamidines as inhibitors of glycosylases. *Abstracts of Papers of the American Chemical Society* **2016**, *251*, CARB 018, Meeting Abstract.
- (41) Striegler, S.; Sharma, B. Macromolecular glycosidase mimics: Designing selective catalytic sites. *Abstracts, 28th International Carbohydrate Symposium, New Orleans, LA, United States, July 17-21, 2016* **2016**, ICS 387, Meeting Abstract.
- (42) Sweere, M.; Huntington, T.; Chen, J. Y.; Perry, D. Development of Pd nanostructures on infrared transparent salt plates. *Abstracts of Papers of the American Chemical Society* **2016**, *251*, CHED 1197, Meeting Abstract.
- (43) Thibado, J. K.; Martfeld, A. N.; Greathouse, D. V.; Koeppen, R. E. Cholesterol Influence on Arginine-Containing Transmembrane Peptides. *Biophysical Journal* **2016**, *110* (3), A251-A251, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.1383.

- (44) Trivedi, V.; Jones, T.; Walker, R.; Henderson, R.; Kumar, T. K. S. On the role of C-Terminal tail helical domain of anabaena sensory rhodopsin transducer in unusual high stability, ligand and receptor interaction. *Protein Science* **2016**, 25, 142-142, Meeting Abstract.
- (45) Wang, F.; Li, J. MP2 hydration free energies of simple salts predicted through adaptive force matching. *Abstracts of Papers of the American Chemical Society* **2016**, 252, PHYS 310, Meeting Abstract.
- (46) Wang, J.; Feng, P.; Zheng, N. 4+2 Annulation of N-aryl cyclobutylanilines with alkynes under visible light: An organic reaction catalyzed by self-doped Ti³⁺@TiO₂ visible light catalyst. *Abstracts of Papers of the American Chemical Society* **2016**, 252, ORGN 288, Meeting Abstract.
- (47) Webb, A.; Leong, K.; Wang, F.; Williams, A. Molecular dynamics investigation of ice nucleation and growth in supercooled water in the presence of an electric field. *Abstracts of Papers of the American Chemical Society* **2016**, 251, COMP 317, Meeting Abstract.
- (48) Wendt, R. M.; Rajagopalan, V.; Greathouse, D. V.; Koeppe, R. E. Investigating Possible Interactions between Ionizable Residues in Model Transmembrane Peptides. *Biophysical Journal* **2016**, 110 (3), A253-A253, Meeting Abstract. DOI: 10.1016/j.bpj.2015.11.1392.
- (49) Whisenhunt, L.; Zong, G.; Hu, Z.; Aljewari, H.; Shi, W. Late-stage modification of C-3 tigoyl moiety of ipomoeassin F to enable SAR studies. *Abstracts, 28th International Carbohydrate Symposium, New Orleans, LA, United States, July 17-21, 2016* **2016**, ICS 284, Meeting Abstract.

2015 (n=46)

- (1) Alismail, H.; Du, Y.; Zhou, J.; Manoharan, A.; Tian, Z. R. Nanofiber bioscaffold sensor for cancer cell detection. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 453, Meeting Abstract.
- (2) Anderson, J. L.; Jayanthi, S.; Thallapuram, S. K. Modulating the mitogenic activity of the fibroblast growth factor. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 1150, Meeting Abstract.
- (3) Bajwa, P.; Gao, F.; Omogo, B. O.; Heyes, C. D. Multishells vs. gradient-alloyed shells on core quantum dots: Ensemble and single particle optical properties. *Abstracts of Papers of the American Chemical Society* **2015**, 249, PHYS 390, Meeting Abstract.
- (4) Barber, E.; Zong, G. H.; Aljewari, H.; Shi, W. Total synthesis and biological evaluation of the C-11 epimer of ipomoeassin F. *Abstracts of Papers of the American Chemical Society* **2015**, 250, MEDI 150, Meeting Abstract.
- (5) Baucom, D.; Gao, F.; Patel, P.; Kight, A.; Goforth, R.; Henry, R. L.; Heyes, C. Interdomain dynamics of chloroplast signal recognition particle proteins studied by time-resolved single-molecule FRET. *Abstracts of Papers of the American Chemical Society* **2015**, 249, PHYS 403, Meeting Abstract.
- (6) Bogy, H. K.; Jayanthi, S.; Thallapuram, S. K. Can native enzyme conformation act as a template for refolding of RNase A. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 1161, Meeting Abstract.

- (7) Chen, J. Understanding the interactions of theranostic gold-based nanostructures with complex biological environment. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 378, Meeting Abstract.
- (8) Chism, T.; Torix, G.; Tian, R. Exploring new physics in photon-photoelectron interactions on micropatterned, orderly branched zinc oxide nanostructures. *Abstracts of Papers of the American Chemical Society* **2015**, MWRM 213, Meeting Abstract.
- (9) Chism, T.; Torix, G.; Tian, Z. R. Exploring new physics in photon-photoelectron interactions on micropatterned, zinc oxide hyper-branched nanorods. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 084, Meeting Abstract.
- (10) Cole, P.; Thornburgh, S.; Burnett, B.; Ozkizilcik, A.; Tian, Z. R.; Carbonero, F. Dynamic nanospheres for individualized, localized drug delivery of chemotherapeutics and antibiotics. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 079, Meeting Abstract.
- (11) Cole, P.; Thornburgh, S.; Burnett, B.; Tian, Z. R.; Carbonero, F. Bactericidal heavy metal nanocomposites for industrial and biomedical platforms. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 093, Meeting Abstract.
- (12) Crane, C.; Chen, J. Pt-Au and Pd-Au bimetallic heterostructures using mask assisted seeded growth. *Abstracts of Papers of the American Chemical Society* **2015**, 249, INOR 331, Meeting Abstract.
- (13) Gao, F.; Kight, A. D.; Henderson, R. C.; Jayanthi, S.; Patel, P.; Goforth, R. L.; Kumar, T. K. S.; Henry, R. L.; Heyes, C. D. Role of Structural Flexibility of cpSRP43 in Binding Substrates during Post-Translational Targeting. *Biophysical Journal* **2015**, 108 (2), A61-A61, Meeting Abstract. DOI: 10.1016/j.bpj.2014.11.367.
- (14) Gao, F.; Kight, A.; Jayanthi, S.; Patel, P.; Goforth, R. L.; Thallapuram, S. K.; Henry, R. L.; Henderson, R.; Heyes, C. D. Promoting binding of protein-targeting substrates by regulating interdomain dynamics within a signal recognition particle: Implications for biotechnology. *Abstracts of Papers of the American Chemical Society* **2015**, 249, BIOT 476, Meeting Abstract.
- (15) Govindarajan, M.; Aljewari, H.; Zong, G.; Shi, W. Cytotoxic natural product Ipomoeassin F: SAR-guided probe design for target identification. *Abstracts of Papers of the American Chemical Society* **2015**, 250, CARB 071, Meeting Abstract.
- (16) Greathouse, D. V.; Kinnun, J. J.; Williams, J. A.; Marquardt, D.; Klauda, J. B.; Koeppe, R. E.; Katsaras, J.; Harroun, T. A.; Wassall, S. R. Disorderly Polyunsaturated Fatty Acids and Orderly Cholesterol: Just How do they get along in a Membrane? *Biophysical Journal* **2015**, 108 (2), A412-A412, Meeting Abstract. DOI: 10.1016/j.bpj.2014.11.2259.
- (17) Heyes, C. D. Careful control of confinement potential and interfacial lattice strain in colloidal quantum dots to improve radiative recombination and fluorescence blinking. *Abstracts of Papers of the American Chemical Society* **2015**, 249, COLL 543, Meeting Abstract.
- (18) Jenkins, S. V.; Chen, J. Ligand effects on the aqueous plasmonic catalysis by alloyed gold-copper nanorods. *Abstracts of Papers of the American Chemical Society* **2015**, 249, COLL 250, Meeting Abstract.

- (19) Jenkins, S. V.; Meeker, D.; Beenken, K. E.; Smeltzer, M. S.; Chen, J. Fabrication of a nanoconjugate for synergistic antibiotic and photothermal treatment of resistant bacteria. *Abstracts of Papers of the American Chemical Society* **2015**, 249, BIOT 360, Meeting Abstract.
- (20) Kumar, S.; Jayanthi, S.; Kumar, T. K. S. Refolding of Denatured-Reduced Lysozyme in the Presence of Native Templates. *FASEB Journal* **2015**, 29 (S1), Meeting Abstract. DOI: 10.1096/fasebj.29.1_supplement.882.1.
- (21) Kumar, S.; Yadav, N.; Marlowe, T.; Chaudhary, A.; Wang, J. M.; O'Malley, J.; Boland, P.; Jayanthi, S.; Kumar, T. K. S.; Yadava, N.; et al. Oxidative phosphorylation-dependent regulation of cancer cell apoptosis in response to anticancer agents. *Cancer Research* **2015**, 75 (S15), 3058-3058, Meeting Abstract. DOI: 10.1158/1538-7445.am2015-3058.
- (22) Kumar, V. S.; Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Influence of a Potentially Destabilizing Central Tryptophan on Transmembrane Helix Domains. *Biophysical Journal* **2015**, 108 (2), A553-A553, Meeting Abstract. DOI: 10.1016/j.bpj.2014.11.3035.
- (23) Li, J.; Wang, F. Mp2 solvation free energy of simple ions obtained through force matching to simple pairwise potentials. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 822, Meeting Abstract.
- (24) Lowe, A.; Greathouse, D. V. Characterization of Membrane Interactions of Antimicrobial Lactoferricin Peptides with Central Residue Substitutions. *Biophysical Journal* **2015**, 108 (2), A554-A554, Meeting Abstract. DOI: 10.1016/j.bpj.2014.11.3040.
- (25) Makkar, S.; Liyanage, R.; Lay, J.; Narayan, R. Proteomic analysis of macrophages activated with salmonella lipopolysaccharide. *Journal of Immunology* **2015**, 194, 1, Meeting Abstract.
- (26) Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Response of GWALP Transmembrane Peptides to Incorporation of Buried Histidine Residues. *Biophysical Journal* **2015**, 108 (2), A553-A553, Meeting Abstract. DOI: 10.1016/j.bpj.2014.11.3033.
- (27) Mathurin, L. E.; Chen, J. Ruthenium incorporated platinum copper nanotubes for electro-oxidation of methanol. *Abstracts of Papers of the American Chemical Society* **2015**, 249, INOR 714, Meeting Abstract.
- (28) McIntosh, M. C. Natural products inspired synthesis. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 473, Meeting Abstract.
- (29) Moradi, M. Effective Riemannian diffusion model for conformational dynamics of membrane transporters. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 901, Meeting Abstract.
- (30) Mortazavi, A.; Rajagopalan, V.; Greathouse, D. V.; Koeppe, R. E. Detection of Helix Fraying in Designed Transmembrane Alpha Helices. *Biophysical Journal* **2015**, 108 (2), A554-A554, Meeting Abstract. DOI: 10.1016/j.bpj.2014.11.3037.
- (31) Ozkizilcik, A.; Murphy, S.; Tian, Z. R. A stimuli-responsive, site-specific nano-drug delivery ideal for oral administration. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 952, Meeting Abstract.

- (32) Phillips, S.; Stenken, J. Toward side-selective modification of microdialysis sampling polyethersulfone (PES) membranes. *Abstracts of Papers of the American Chemical Society* **2015**, 249, POLY 284, Meeting Abstract.
- (33) Puckett, L.; Durham, B. Novel synthesis of a dinuclear ruthenium(II) polypyridyl complex based on a polymeric carbonyl complex. *Abstracts of Papers of the American Chemical Society* **2015**, 249, INOR 618, Meeting Abstract.
- (34) Rajagopalan, V.; Greathouse, D. V.; Koeppel, R. E. Ionization-Dependent Behavior of Transmembrane Helices that Incorporate Glu or Tyr Residues. *Biophysical Journal* **2015**, 108 (2), A554-A554, Meeting Abstract. DOI: 10.1016/j.bpj.2014.11.3036.
- (35) Robinson, C.; Heyes, C. D. Influence of shelling temperature and time on the optical and structural properties of CuInS₂/ZnS quantum dots. *Abstracts of Papers of the American Chemical Society* **2015**, 249, COLL 192, Meeting Abstract.
- (36) Rogers, T. R.; Leong, K.; Wang, F. Computational investigation of the surface tension of supercooled water. *Abstracts of Papers of the American Chemical Society* **2015**, 249, CHED 665, Meeting Abstract.
- (37) Seyran, E.; Liyanage, R.; Lay, J. O.; Stites, W. Expression and purification of recombinant Von Willebrand factor A1A2A3 domains. *FEBS Journal* **2015**, 282, 384-384, Meeting Abstract. DOI: 10.1111/febs.13339.
- (38) Sharma, H. S.; Muresanu, D. F.; Tian, Z. R.; Ozkizlicik, A.; Lafuente, J. V.; Moessler, H.; Sharma, A. TiO₂ Nanowired Cerebrolysin Attenuates Overexpression of Ubiquitin and Nitric Oxide Synthase and Induces Neuroprotection Following Spinal Cord Trauma. *Journal of Head Trauma Rehabilitation* **2015**, 30 (3), E80-E81, Meeting Abstract. DOI: 10.1097/htr.0000000000000150.
- (39) Shi, W. Chemical proteomics to the development of natural glycoconjugates towards novel anticancer agents. *Abstracts of Papers of the American Chemical Society* **2015**, MWRM 005, Meeting Abstract.
- (40) Spahn, E. S.; McIntosh, M. C.; Gawley, R. E. Toward the reproducibility of CuIPhEt hydrosilylations. *Abstracts of Papers of the American Chemical Society* **2015**, 249, ORGN 022, Meeting Abstract.
- (41) Thibado, J. K.; Martfeld, A. N.; Greathouse, D. V.; Koeppel, R. E. Influence of Cholesterol on Single Arginine-Containing Transmembrane Helical Peptides. *Biophysical Journal* **2015**, 108 (2), A553-A553, Meeting Abstract. DOI: 10.1016/j.bpj.2014.11.3034.
- (42) Turgut, H.; Rogers, R.; White, C.; Tian, Z. R. New chemistry in making the nonflammable graphene oxide membranes for rechargeable batteries and fuel-cells. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 094, Meeting Abstract.
- (43) Walker, B.; McIntosh, M. C. Progress and efforts toward the asymmetric total synthesis of antascomycin B. *Abstracts of Papers of the American Chemical Society* **2015**, 249, ORGN 056, Meeting Abstract.
- (44) Walker, B.; McIntosh, M. C. Progress of the total asymmetric synthesis of antascomycin B. *Abstracts of Papers of the American Chemical Society* **2015**, SERMACS-SWRM 397, Meeting Abstract.

- (45) Whitlock, S. E.; Koeppen, R. E.; Greathouse, D. A. Comparing Peptide-Lipid Interactions and Antimicrobial Activities of Peptides with Similar "Core" Lengths But Variable Arginine and Tryptophan Residues. *Biophysical Journal* **2015**, *108* (2), A554-A554, Meeting Abstract. DOI: 10.1016/j.bpj.2014.11.3038.
- (46) Zong, G. H.; Aljewari, H.; Govindarajan, M.; Barber, E.; Whisenhunt, L.; Shi, W. Total synthesis and SAR study of ipomoeassin F. *Abstracts of Papers of the American Chemical Society* **2015**, *250*, MEDI 176, Meeting Abstract.

2014 (n=27)

- (1) Ayinuola, K.; Chen, L.; McIntosh, M. C. Recent advances in azole-based Claisen rearrangements. *Abstracts of Papers of the American Chemical Society* **2014**, *248*, ORGN 1050, Meeting Abstract.
- (2) Beaven, A. H.; Sodt, A. J.; Greathouse, D. V.; Koeppen, R. E.; Pastor, R. W.; Andersen, O. S.; Im, W. All-Atom Simulation and Continuum Elastic Theory of Gramicidin a in Binary Component Lipid Bilayers. *Biophysical Journal* **2014**, *106* (2), A801-A801, Meeting Abstract. DOI: 10.1016/j.bpj.2013.11.4389.
- (3) Chandrashekhar, R.; Morris, K.; Heyes, C. D.; Adams, P. D. Intrinsic GTP Hydrolysis is Observed For a Switch 1 Mutant of Cdc42 in the Presence of a Specific GTPase Inhibitor. *Protein Science* **2014**, *23* (S1), 119-119, Meeting Abstract. DOI: 10.1002/pro.2504.
- (4) Chen, J.; Chen, S.; Jenkins, S.; Miller, E. Seeded co-reduction of Cu-containing bimetallic nanostructures and their catalytic applications. *Abstracts of Papers of the American Chemical Society* **2014**, *247*, COLL 322, Meeting Abstract.
- (5) Chen, J.; Jenkins, S.; Srivatsan, A.; Reynolds, K.; Pandey, R. Controlled release of hydrophobic drugs from poly(ethylene glycol) covered gold nanocages. *Abstracts of Papers of the American Chemical Society* **2014**, *247*, COLL 318, Meeting Abstract.
- (6) Crane, C.; Chen, J. Synthesis of metallic Janus nanoparticles using silica as a protecting group. *Abstracts of Papers of the American Chemical Society* **2014**, *247*, INOR 604, Meeting Abstract.
- (7) Feng, L.; Sharma, A.; Muresanu, D. F.; Patnaik, R.; Tian, Z. R.; Sharma, H. S. Nanowired Delivery of Mesenchymal Stem Cells (MSCs) Attenuates Pathophysiology of Spinal Cord Injury and Enhances Brain-Derived Neurotrophic Factor and Insulin-Like Growth Factor-1 Concentrations in the Plasma and the Spinal Cord. *Cell Transplantation* **2014**, *23* (6), 769-770, Meeting Abstract. DOI: 10.3727/096368914x68007.
- (8) Henderson, R.; Furr, M.; Jayanthi, S.; Brown, A.; Goforth, R.; Henry, R.; Kumar, T. K. S. Three-Dimensional Structure of the 54-Kda Subunit of the Chloroplast Signal Recognition Particle using Molecular Modeling. *Biophysical Journal* **2014**, *106* (2), A656-A656, Meeting Abstract. DOI: 10.1016/j.bpj.2013.11.3631.
- (9) Henderson, R.; Kumar, S.; Heyes, C.; Henry, R. Three-dimensional Structure of the 54 kDa Subunit of the Chloroplast Signal Recognition Particle using Molecular Modeling. *Protein Science* **2014**, *23*, 119-119, Meeting Abstract.

- (10) Janowski, T.; Pulay, P. Localized Laplace transformed coupled cluster perturbative triples correction in quasiamionic orbitals. *Abstracts of Papers of the American Chemical Society* **2014**, 248, COMP 452, Meeting Abstract.
- (11) Janowski, T.; Wolinski, K.; Pulay, P. Generalized multipole polarizabilities and their use in ultrafast QM/MM simulations. *Abstracts of Papers of the American Chemical Society* **2014**, SERMACS 618, Meeting Abstract.
- (12) Jenkins, S. V.; Chen, J.; Zhang, Y. Detection of nanoparticle aggregation in complex, biological environments. *Abstracts of Papers of the American Chemical Society* **2014**, 247, COLL 316, Meeting Abstract.
- (13) Kumar, S.; Kumar, T. K. S. Is Refolding of Lysozyme Template-Driven. *Biophysical Journal* **2014**, 106 (2), A470-A470, Meeting Abstract. DOI: 10.1016/j.bpj.2013.11.2660.
- (14) Kumar, V. S.; Doss, B. P.; Greathouse, D. V.; Koeppe, R. E. Influence of a Central Tryptophan and of Cholesterol on the Properties of Defined Transmembrane Helical Peptides. *Biophysical Journal* **2014**, 106 (2), A711-A711, Meeting Abstract. DOI: 10.1016/j.bpj.2013.11.3935.
- (15) Lay, J. O.; Gidden, J.; Liyanage, R. MALDI mass spectrometry of cells, extracts and crude mixtures. *Abstracts of Papers of the American Chemical Society* **2014**, 247, IEC 019, Meeting Abstract.
- (16) Lisunova, M.; Norman, J.; Wei, X.; Jenkins, S.; Chen, J.; Roper, D. K. Hollow nanocages dispersion and its photothermal properties. *Abstracts of Papers of the American Chemical Society* **2014**, 248, COLL 667, Meeting Abstract.
- (17) Martfeld, A. N.; Greathouse, D. V.; Koeppe, R. E. Influence of pH and Histidine Residues on Membrane-Spanning Helical Peptides. *Biophysical Journal* **2014**, 106 (2), A712-A712, Meeting Abstract. DOI: 10.1016/j.bpj.2013.11.3938.
- (18) Mathurin, L. E.; Chen, S.; Chen, J. Tailoring surface composition and morphology of platinum-copper nanotubes through in situ galvanic replacement reaction. *Abstracts of Papers of the American Chemical Society* **2014**, 247, INOR 623, Meeting Abstract.
- (19) McIntosh, M.; Ayinuola, K.; Alwarsh, S. Rearrangement of the Breslow intermediate. *Abstracts of Papers of the American Chemical Society* **2014**, MWRM 258, Meeting Abstract.
- (20) Nash, C.; Fritsch, I. Advances in redox-magnetohydrodynamic (RMHD) pumping via electrochemistry of PEDOT-modified electrodes. *Abstracts of Papers of the American Chemical Society* **2014**, 247, ANYL 017, Meeting Abstract.
- (21) Pellegrino, R. A.; Kerr, R.; Kumar, T. K. S. Understanding the Structural Determinants for the Stability of Human Fibroblast Growth Factor. *Biophysical Journal* **2014**, 106 (2), A654-A654, Meeting Abstract. DOI: 10.1016/j.bpj.2013.11.3620.
- (22) Pulay, P.; Janowski, T.; Wolinski, K. Generalized multipole polarizabilities and their use in ultrafast QM/MM simulations. *Abstracts of Papers of the American Chemical Society* **2014**, 248, COMP 066, Meeting Abstract.

- (23) Rajagopalan, V.; Greathouse, D. V.; Koeppen, R. E. Influence of Glutamic Acid Residues on the Properties of Model Membrane-Spanning Helices. *Biophysical Journal* **2014**, *106* (2), A711-A712, Meeting Abstract. DOI: 10.1016/j.bpj.2013.11.3937.
- (24) Sahore, V.; Kreidermacher, A.; Nash, C. K.; Fritsch, I. Electrochemically-generated density-gradient induced natural convection in microfluidic systems. *Abstracts of Papers of the American Chemical Society* **2014**, *247*, ANYL 020, Meeting Abstract.
- (25) Sanders, K.; Jayanthi, S.; Kumar, T. K. S. Understanding the Structural Determinants of the Extreme Thermal Stability of Rubredoxin. *Biophysical Journal* **2014**, *106* (2), A667-A667, Meeting Abstract. DOI: 10.1016/j.bpj.2013.11.3694.
- (26) Sharma, A.; Muresanu, D. F.; Patnaik, R.; Huang, H.; Tian, Z. R.; Moessler, H.; Sharma, H. S. Superior Neuroprotective Efficacy of Nanodrug Delivery of Cerebrolysin Compared to Other Neurotrophic Factors in Concussive Head Injury. *Cell Transplantation* **2014**, *23* (6), 782-782, Meeting Abstract. DOI: 10.3727/096368914x68007.
- (27) Wood, M. K.; Koeppen, R. E.; Greathouse, D. V. Characterizing Moderately Short Antimicrobial Tryptophan/Arginine-Rich Peptides. *Biophysical Journal* **2014**, *106* (2), A96-A97, Meeting Abstract. DOI: 10.1016/j.bpj.2013.11.604.

Book Chapter (n=59)

2023 (n=19) – up to November

- (1) Buzoianu, A. D.; Sharma, A.; Muresanu, D. F.; Feng, L.; Huang, H.; Chen, L.; Tian, Z. R.; Nozari, A.; Lafuente, J. V.; Sjöqvist, P.-O.; et al. Nanodelivery of histamine H3 receptor inverse agonist BF-2649 with H3 receptor antagonist and H4 receptor agonist clobenpropit induced neuroprotection is potentiated by antioxidant compound H-290/51 in spinal cord injury. In *Nanowired Delivery of Drugs and Antibodies for Neuroprotection in Brain Diseases with Co-Morbidity Factors Part B*, Janak, P., Jenner, P. Eds.; International Review of Neurobiology, Vol. 172; Academic Press, 2023; pp 37-77.
- (2) Buzoianu, A. D.; Sharma, A.; Muresanu, D. F.; Feng, L.; Huang, H.; Chen, L.; Tian, Z. R.; Nozari, A.; Lafuente, J. V.; Wiklund, L.; et al. Nanodelivery of Histamine H3/H4 Receptor Modulators BF-2649 and Clobenpropit with Antibodies to Amyloid Beta Peptide in Combination with Alpha Synuclein Reduces Brain Pathology in Parkinson's Disease. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 55-96.
- (3) Feng, L.; Sharma, A.; Wang, Z.; Muresanu, D. F.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Nozari, A.; Li, C.; Zhang, Z.; et al. Nanowired delivery of dl-3-n-butylphthalide with antibodies to alpha synuclein potentiated neuroprotection in Parkinson's disease with emotional stress. In *Nanowired Delivery of Drugs and Antibodies for Neuroprotection in Brain Diseases with Co-morbidity Factors*, Sharma, H. S., Wiklund, L., Sharma, A. Eds.; International Review of Neurobiology, Vol. 171; Academic Press, 2023; pp 47-82.
- (4) Feng, L.; Sharma, A.; Wang, Z.; Muresanu, D. F.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Nozari, A.; Wiklund, L.; Sharma, H. S. Co-administration of Nanowired DL-3-n-Butylphthalide (DL-NBP) Together with Mesenchymal Stem Cells, Monoclonal Antibodies to Alpha Synuclein and TDP-43 (TAR DNA-Binding Protein 43) Enhance Superior Neuroprotection in Parkinson's Disease Following Concussive Head Injury. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 97-138.
- (5) Lafuente, J. V.; Sharma, A.; Feng, L.; Muresanu, D. F.; Nozari, A.; Tian, Z. R.; Buzoianu, A. D.; Sjöquist, P.-O.; Wiklund, L.; Sharma, H. S. Nanowired Delivery of Mesenchymal Stem Cells with Antioxidant Compound H-290/51 Reduces Exacerbation of Methamphetamine Neurotoxicity in Hot Environment. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 317-352.
- (6) Muresanu, D. F.; Sharma, A.; Tian, Z. R.; Lafuente, J. V.; Nozari, A.; Feng, L.; Buzoianu, A. D.; Wiklund, L.; Sharma, H. S. Nanowired Delivery of Cerebrolysin with Mesenchymal Stem Cells Attenuates Heat Stress-Induced Exacerbation of Neuropathology Following Brain Blast Injury. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 231-270.
- (7) Nozari, A.; Sharma, A.; Wang, Z.; Feng, L.; Muresanu, D. F.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Wiklund, L.; Sharma, H. S. Co-administration of Nanowired Oxiracetam and Neprilysin with Monoclonal Antibodies to Amyloid Beta Peptide and p-Tau Thwarted Exacerbation of Brain Pathology in Concussive Head

Injury at Hot Environment. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 271-313.

(8) Okoto, P. S.; Sonniala, S.; Sakhel, B.; Muhoza, D.; Adams, P.; Kumar, T. K. S. A Simple Purification Method for Heat-Stable Recombinant Low Molecular Weight Proteins and Peptides Via GST-Fusion Products. In *Advanced Methods in Structural Biology*, Sousa, Â., Passarinha, L. Eds.; Methods in Molecular Biology, Vol. 2652; Humana Press, 2023; pp 147-169.

(9) Ottonelli, I.; Sharma, A.; Ruozzi, B.; Tosi, G.; Duskey, J. T.; Vandelli, M. A.; Lafuente, J. V.; Nozari, A.; Muresanu, D. F.; Buzoianu, A. D.; et al. Nanowired Delivery of Curcumin Attenuates Methamphetamine Neurotoxicity and Elevates Levels of Dopamine and Brain-Derived Neurotrophic Factor. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 385-416.

(10) Ozkizilcik, A.; Sharma, A.; Feng, L.; Muresanu, D. F.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Nozari, A.; Wiklund, L.; Sharma, H. S. Nanowired delivery of antibodies to tau and neuronal nitric oxide synthase together with cerebrolysin attenuates traumatic brain injury induced exacerbation of brain pathology in Parkinson's disease. In *Nanowired Delivery of Drugs and Antibodies for Neuroprotection in Brain Diseases with Co-morbidity Factors*, Sharma, H. S., Wiklund, L., Sharma, A. Eds.; International Review of Neurobiology, Vol. 171; Academic Press, 2023; pp 83-121.

(11) Sharma, A.; Feng, L.; Muresanu, D. F.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Nozari, A.; Bryukhovetskiy, I.; Manzhulo, I.; Wiklund, L.; et al. Nanowired Delivery of Cerebrolysin Together with Antibodies to Amyloid Beta Peptide, Phosphorylated Tau, and Tumor Necrosis Factor Alpha Induces Superior Neuroprotection in Alzheimer's Disease Brain Pathology Exacerbated by Sleep Deprivation. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 3-53.

(12) Sharma, A.; Feng, L.; Muresanu, D. F.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Nozari, A.; Bryukhovetskiy, I.; Manzhulo, I.; Wiklund, L.; et al. Sleep deprivation enhances amyloid beta peptide, p-tau and serotonin in the brain: Neuroprotective effects of nanowired delivery of cerebrolysin with monoclonal antibodies to amyloid beta peptide, p-tau and serotonin. In *Nanowired Delivery of Drugs and Antibodies for Neuroprotection in Brain Diseases with Co-morbidity Factors*, Sharma, H. S., Wiklund, L., Sharma, A. Eds.; International Review of Neurobiology, Vol. 171; Academic Press, 2023; pp 125-162.

(13) Sharma, A.; Feng, L.; Muresanu, D. F.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Nozari, A.; Wiklund, L.; Sharma, H. S. Spinal cord injury induced exacerbation of Alzheimer's disease like pathophysiology is reduced by topical application of nanowired cerebrolysin with monoclonal antibodies to amyloid beta peptide, p-tau and tumor necrosis factor alpha. In *Nanowired Delivery of Drugs and Antibodies for Neuroprotection in Brain Diseases with Co-Morbidity Factors Part B*, Janak, P., Jenner, P. Eds.; International Review of Neurobiology, Vol. 172; Academic Press, 2023; pp 3-35.

(14) Sharma, A.; Muresanu, D. F.; Tian, Z. R.; Nozari, A.; Lafuente, J. V.; Buzoianu, A. D.; Sjöquist, P.-O.; Feng, L.; Wiklund, L.; Sharma, H. S. Co-Administration of Nanowired Monoclonal Antibodies to Inducible Nitric Oxide Synthase and Tumor Necrosis Factor Alpha Together with Antioxidant H-290/51 Reduces SiO₂ Nanoparticles-Induced Exacerbation of Pathophysiology of Spinal Cord Trauma. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 195-229.

- (15) Sharma, H. S.; Feng, L.; Muresanu, D. F.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Nozari, A.; Bryukhovetskiy, I.; Manzhulo, I.; Wiklund, L.; et al. Stress induced exacerbation of Alzheimer's disease brain pathology is thwarted by co-administration of nanowired cerebrolysin and monoclonal amyloid beta peptide antibodies with serotonin 5-HT6 receptor antagonist SB-399885. In *Nanowired Delivery of Drugs and Antibodies for Neuroprotection in Brain Diseases with Co-morbidity Factors*, Sharma, H. S., Wiklund, L., Sharma, A. Eds.; International Review of Neurobiology, Vol. 171; Academic Press, 2023; pp 3-46.
- (16) Sharma, H. S.; Muresanu, D. F.; Nozari, A.; Lafuente, J. V.; Buzoianu, A. D.; Tian, Z. R.; Huang, H.; Feng, L.; Bryukhovetskiy, I.; Manzhulo, I.; et al. Neuroprotective Effects of Nanowired Delivery of Cerebrolysin with Mesenchymal Stem Cells and Monoclonal Antibodies to Neuronal Nitric Oxide Synthase in Brain Pathology Following Alzheimer's Disease Exacerbated by Concussive Head Injury. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 139-192.
- (17) Tian, Z. R.; Sharma, A.; Muresanu, D. F.; Sharma, S.; Feng, L.; Zhang, Z.; Li, C.; Buzoianu, A. D.; Lafuente, J. V.; Nozari, A.; et al. Nicotine neurotoxicity exacerbation following engineered Ag and Cu (50-60 nm) nanoparticles intoxication. Neuroprotection with nanowired delivery of antioxidant compound H-290/51 together with serotonin 5-HT3 receptor antagonist ondansetron. In *Nanowired Delivery of Drugs and Antibodies for Neuroprotection in Brain Diseases with Co-Morbidity Factors Part B*, Janak, P., Jenner, P. Eds.; International Review of Neurobiology, Vol. 172; Academic Press, 2023; pp 189-233.
- (18) Wang, Z. G.; Sharma, A.; Feng, L.; Muresanu, D. F.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Nozari, A.; Huang, H.; Chen, L.; et al. Co-administration of dl-3-n-butylphthalide and neprilysin is neuroprotective in Alzheimer disease associated with mild traumatic brain injury. In *Nanowired Delivery of Drugs and Antibodies for Neuroprotection in Brain Diseases with Co-Morbidity Factors Part B*, Janak, P., Jenner, P. Eds.; International Review of Neurobiology, Vol. 172; Academic Press, 2023; pp 145-185.
- (19) Wiklund, L.; Sharma, A.; Muresanu, D. F.; Zhang, Z.; Li, C.; Tian, Z. R.; Buzoianu, A. D.; Lafuente, J. V.; Nozari, A.; Feng, L.; et al. TiO₂-Nanowired Delivery of Chinese Extract of Ginkgo biloba EGb-761 and Bilobalide BN-52021 Enhanced Neuroprotective Effects of Cerebrolysin Following Spinal Cord Injury at Cold Environment. In *Progress in Nanomedicine in Neurologic Diseases*, Sharma, H. S., Sharma, A. Eds.; Advances in Neurobiology, Vol. 32; Springer, 2023; pp 353-384.

2021 (n=13)

- (1) Maity, S.; Al-Ameer, M.; Gundampati, R. K.; Agrawal, S.; Kumar, T. K. S. Heparin-Binding Affinity Tag: A Novel Affinity Tag for Simple and Efficient Purification of Recombinant Proteins. In *Protein Downstream Processing: Design, Development, and Application of High and Low-Resolution Methods*, Labrou, N. E. Ed.; Methods in Molecular Biology, Vol. 2178; Humana Press, 2021; pp 311-328.
- (2) Niu, F.; Sharma, A.; Wang, Z.; Feng, L.; Muresanu, D. F.; Sahib, S.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Castellani, R. J.; et al. Nanodelivery of oxiracetam enhances memory, functional recovery and induces neuroprotection following concussive head injury. In *Nanomedicine and Neuroprotection in Brain Diseases*, Sharma, H. S., Sharma, A. Eds.; Progress in Brain Research, Vol. 265; Elsevier Academic Press Inc, 2021; pp 139-230.

- (3) Ogden, D.; Moradi, M. Molecular Dynamics-Based Thermodynamic and Kinetic Characterization of Membrane Protein Conformational Transitions. In *Structure and Function of Membrane Proteins*, Schmidt-Krey, I., Gumbart, J. C. Eds.; Methods in Molecular Biology, Vol. 2302; Humana Press, 2021; pp 289-309.
- (4) Sahib, S.; Sharma, A.; Muresanu, D. F.; Zhang, Z.; Li, C.; Tian, Z. R.; Buzoianu, A. D.; Lafuente, J. V.; Castellani, R. J.; Nozari, A.; et al. Nanodelivery of traditional Chinese Gingko Biloba extract EGb-761 and bilobalide BN-52021 induces superior neuroprotective effects on pathophysiology of heat stroke. In *Nanomedicine and Neuroprotection in Brain Diseases*, Progress in Brain Research, Vol. 265; Elsevier Academic Press Inc, 2021; pp 249-315.
- (5) Sharma, A.; Feng, L. Y.; Muresanu, D. F.; Huang, H. Y.; Menon, P. K.; Sahib, S.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Castellani, R. J.; et al. Topical application of CNTF, GDNF and BDNF in combination attenuates blood-spinal cord barrier permeability, edema formation, hemeoxygenase-2 upregulation, and cord pathology. In *Brain Protection Strategies and Nanomedicine*, Progress in Brain Research, Vol. 266; Elsevier Academic Press Inc, 2021; pp 357-376.
- (6) Sharma, A.; Feng, L.; Muresanu, D. F.; Sahib, S.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Castellani, R. J.; Nozari, A.; Wiklund, L.; et al. Manganese nanoparticles induce blood-brain barrier disruption, cerebral blood flow reduction, edema formation and brain pathology associated with cognitive and motor dysfunctions. In *Nanomedicine and Neuroprotection in Brain Diseases*, Progress in Brain Research, Vol. 265; Elsevier Academic Press Inc, 2021; pp 385-406.
- (7) Sharma, A.; Muresanu, D. F.; Patnaik, R.; Menon, P. K.; Tian, Z. R.; Sahib, S.; Castellani, R. J.; Nozari, A.; Lafuente, J. V.; Buzoianu, A. D.; et al. Histamine H3 and H4 receptors modulate Parkinson's disease induced brain pathology. Neuroprotective effects of nanowired BF-2649 and clobenpropit with anti-histamine-antibody therapy. In *Brain Protection Strategies and Nanomedicine*, Progress in Brain Research, Vol. 266; Elsevier Academic Press Inc, 2021; pp 1-73.
- (8) Sharma, H. S.; Lafuente, J. V.; Feng, L.; Muresanu, D. F.; Menon, P. K.; Castellani, R. J.; Nozari, A.; Sahib, S.; Tian, Z. R.; Buzoianu, A. D.; et al. Methamphetamine exacerbates pathophysiology of traumatic brain injury at high altitude. Neuroprotective effects of nanodelivery of a potent antioxidant compound H-290/51. In *Brain Protection Strategies and Nanomedicine*, Progress in Brain Research, Vol. 266; Elsevier Academic Press Inc, 2021; pp 123-193.
- (9) Sharma, H. S.; Lafuente, J. V.; Muresanu, D. F.; Sahib, S.; Tian, Z. R.; Menon, P. K.; Castellani, R. J.; Nozari, A.; Buzoianu, A. D.; Sjöquist, P.-O.; et al. Neuroprotective effects of insulin like growth factor-1 on engineered metal nanoparticles Ag, Cu and Al induced blood-brain barrier breakdown, edema formation, oxidative stress, upregulation of neuronal nitric oxide synthase and brain pathology. In *Brain Protection Strategies and Nanomedicine*, Progress in Brain Research, Vol. 266; Elsevier Academic Press Inc, 2021; pp 97-121.
- (10) Sharma, H. S.; Muresanu, D. F.; Castellani, R. J.; Nozari, A.; Lafuente, J. V.; Buzoianu, A. D.; Sahib, S.; Tian, Z. R.; Bryukhovetskiy, I.; Manzhulo, I.; et al. Alzheimer's disease neuropathology is exacerbated following traumatic brain injury. Neuroprotection by co-administration of nanowired mesenchymal stem cells and cerebrolysin with monoclonal antibodies to amyloid beta peptide. In *Nanomedicine and Neuroprotection in Brain Diseases*, Progress in Brain Research, Vol. 265; Elsevier Academic Press Inc, 2021; pp 1-97.

- (11) Sharma, H. S.; Muresanu, D. F.; Ozkizilcik, A.; Sahib, S.; Tian, Z. R.; Lafuente, J. V.; Castellani, R. J.; Nozari, A.; Feng, L.; Buzoianu, A. D.; et al. Superior antioxidant and anti-ischemic neuroprotective effects of cerebrolysin in heat stroke following intoxication of engineered metal Ag and Cu nanoparticles: A comparative biochemical and physiological study with other stroke therapies. In *Brain Protection Strategies and Nanomedicine*, Progress in Brain Research, Vol. 266; Elsevier Academic Press Inc, 2021; pp 301-348.
- (12) Sharma, H. S.; Muresanu, D. F.; Sahib, S.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Castellani, R. J.; Nozari, A.; Li, C.; Zhang, Z.; et al. Cerebrolysin restores balance between excitatory and inhibitory amino acids in brain following concussive head injury. Superior neuroprotective effects of TiO₂ nanowired drug delivery. In *Brain Protection Strategies and Nanomedicine*, Progress in Brain Research, Vol. 266; Elsevier Academic Press Inc, 2021; pp 211-267.
- (13) Wiklund, L.; Sharma, A.; Patnaik, R.; Muresanu, D. F.; Sahib, S.; Tian, Z. R.; Castellani, R. J.; Nozari, A.; Lafuente, J. V.; Sharma, H. S. Upregulation of hemeoxygenase enzymes HO-1 and HO-2 following ischemia-reperfusion injury in connection with experimental cardiac arrest and cardiopulmonary resuscitation: Neuroprotective effects of methylene blue. In *Nanomedicine and Neuroprotection in Brain Diseases*, Progress in Brain Research, Vol. 265; Elsevier Academic Press Inc, 2021; pp 317-375.

2020 (n=8)

- (1) Muresanu, D. F.; Sharma, A.; Sahib, S.; Tian, Z. R.; Feng, L.; Castellani, R. J.; Nozari, A.; Lafuente, J. V.; Buzoianu, A. D.; Sjöquist, P.-O.; et al. Diabetes exacerbates brain pathology following a focal blast brain injury: New role of a multimodal drug cerebrolysin and nanomedicine. In *Neuropharmacology of Neuroprotection*, Sharma, H. S., Sharma, A. Eds.; Progress in Brain Research, Vol. 258; Elsevier, 2020; pp 285-367.
- (2) Niu, F.; Sharma, A.; Wang, Z.; Feng, L.; Muresanu, D. F.; Sahib, S.; Tian, Z. R.; Lafuente, J. V.; Buzoianu, A. D.; Castellani, R. J.; et al. Co-administration of TiO₂-nanowired DL-3-n-butylphthalide (DL-NBP) and mesenchymal stem cells enhanced neuroprotection in Parkinson's disease exacerbated by concussive head injury. In *Neuropharmacology of Neuroprotection*, Sharma, H. S., Sharma, A. Eds.; Progress in Brain Research, Vol. 258; Elsevier, 2020; pp 101-155.
- (3) Sahib, S.; Sharma, A.; Menon, P. K.; Muresanu, D. F.; Castellani, R. J.; Nozari, A.; Lafuente, J. V.; Bryukhovetskiy, I.; Tian, Z. R.; Patnaik, R.; et al. Cerebrolysin enhances spinal cord conduction and reduces blood-spinal cord barrier breakdown, edema formation, immediate early gene expression and cord pathology after injury. In *Neuropharmacology of Neuroprotection*, Sharma, H. S., Sharma, A. Eds.; Progress in Brain Research, Vol. 258; Elsevier, 2020; pp 397-438.
- (4) Sharma, A.; Muresanu, D. F.; Castellani, R. J.; Nozari, A.; Lafuente, J. V.; Sahib, S.; Tian, Z. R.; Buzoianu, A. D.; Patnaik, R.; Wiklund, L.; et al. Mild traumatic brain injury exacerbates Parkinson's disease induced hemeoxygenase-2 expression and brain pathology: Neuroprotective effects of co-administration of TiO₂ nanowired mesenchymal stem cells and cerebrolysin. In *Neuropharmacology of Neuroprotection*, Sharma, H. S., Sharma, A. Eds.; Progress in Brain Research, Vol. 258; Elsevier, 2020; pp 157-231.
- (5) Sharma, A.; Muresanu, D. F.; Sahib, S.; Tian, Z. R.; Castellani, R. J.; Nozari, A.; Lafuente, J. V.; Buzoianu, A. D.; Bryukhovetskiy, I.; Manzhulo, I.; et al. Concussive head injury exacerbates neuropathology of sleep deprivation:

Superior neuroprotection by co-administration of TiO₂-nanowired cerebrolysin, alpha-melanocyte-stimulating hormone, and mesenchymal stem cells. In *Neuropharmacology of Neuroprotection*, Sharma, H. S., Sharma, A. Eds.; Progress in Brain Research, Vol. 258; Elsevier, 2020; pp 1-77.

(6) Sharma, H. S.; Muresanu, D. F.; Castellani, R. J.; Nozari, A.; Lafuente, J. V.; Tian, Z. R.; Sahib, S.; Bryukhovetskiy, I.; Bryukhovetskiy, A.; Buzoianu, A. D.; et al. Pathophysiology of blood-brain barrier in brain tumor. Novel therapeutic advances using nanomedicine. In *Novel Therapeutic Advances in Glioblastoma*, Bryukhovetskiy, I., Sharma, A., Zhang, Z., Sharma, H. S. Eds.; International Review of Neurobiology, Vol. 151; Academic Press Ltd-Elsevier Science Ltd, 2020; pp 1-66.

(7) Sharma, H. S.; Sahib, S.; Tian, Z. R.; Muresanu, D. F.; Nozari, A.; Castellani, R. J.; Lafuente, J. V.; Wiklund, L.; Sharma, A. Protein kinase inhibitors in traumatic brain injury and repair: New roles of nanomedicine. In *Neuropharmacology of Neuroprotection*, Sharma, H. S., Sharma, A. Eds.; Progress in Brain Research, Vol. 258; Elsevier, 2020; pp 233-283.

(8) Sutherland, J. B.; Rafii, F.; Lay, J. O., Jr.; Williams, A. J. Rapid Analytical Methods to Identify Antibiotic-Resistant Bacteria. In *Antibiotic Drug Resistance*, Capelo-Martínez, J.-L., Igredas, G. Eds.; John Wiley & Sons Inc., 2020; pp 533-566.

2019 (n=6)

(1) Heyes, C. D. Quantum dots in single molecule spectroscopy. In *Spectroscopy and Dynamics of Single Molecules: Methods and Applications*, Johnson, C. K. Ed.; Developments in Physical & Theoretical Chemistry, Elsevier, 2019; pp 163-228.

(2) Niu, F.; Sharma, A.; Feng, L.; Ozkizilcik, A.; Muresanu, D. F.; Lafuente, J. V.; Tian, Z. R.; Nozari, A.; Sharma, H. S. Nanowired delivery of DL-3-n-butylphthalide induces superior neuroprotection in concussive head injury. In *Nanoneuroprotection and Nanoneurotoxicology*, Sharma, A., Sharma, H. S. Eds.; Progress in Brain Research, Vol. 245; Academic Press Ltd-Elsevier Science Ltd, 2019; pp 89-118.

(3) Ozkizilcik, A.; Sharma, A.; Lafuente, J. V.; Muresanu, D. F.; Castellani, R. J.; Nozari, A.; Tian, Z. R.; Mössler, H.; Sharma, H. S. Nanodelivery of cerebrolysin reduces pathophysiology of Parkinson's disease. In *Nanoneuroprotection and Nanoneurotoxicology*, Sharma, A., Sharma, H. S. Eds.; Progress in Brain Research, Vol. 245; Academic Press Ltd-Elsevier Science Ltd, 2019; pp 201-246.

(4) Sahib, S.; Niu, F.; Sharma, A.; Feng, L.; Tian, Z. R.; Muresanu, D. F.; Nozari, A.; Sharma, H. S. Potentiation of spinal cord conduction and neuroprotection following nanodelivery of DL-3-n-butylphthalide in titanium implanted nanomaterial in a focal spinal cord injury induced functional outcome, blood-spinal cord barrier breakdown and edema formation. In *New Therapeutic Strategies for Brain Edema and Cell Injury*, Sharma, H. S., Sharma, A. Eds.; International Review of Neurobiology, Vol. 146; Elsevier Academic Press Inc, 2019; pp 153-188.

(5) Sharma, A.; Muresanu, D. F.; Ozkizilcik, A.; Tian, Z. R.; Lafuente, J. V.; Manzhulo, I.; Mössler, H.; Sharma, H. S. Sleep deprivation exacerbates concussive head injury induced brain pathology: Neuroprotective effects of nanowired delivery of cerebrolysin with alpha-melanocyte-stimulating hormone. In *Nanoneuroprotection and*

Nanoneurotoxicology, Progress in Brain Research, Vol. 245; Academic Press Ltd-Elsevier Science Ltd, 2019; pp 1-55.

(6) Sharma, H. S.; Muresanu, D. F.; Castellani, R. J.; Nozari, A.; Lafuente, J. V.; Tian, Z. R.; Ozkizilcik, A.; Manzhulo, I.; Mössler, H.; Sharma, A. Nanowired delivery of cerebrolysin with neprilysin and p-Tau antibodies induces superior neuroprotection in Alzheimer's disease. In *Nanoneuroprotection and Nanoneurotoxicology*, Sharma, A., Sharma, H. S. Eds.; Progress in Brain Research, Vol. 245; Academic Press Ltd-Elsevier Science Ltd, 2019; pp 145-200.

2018 (n=2)

(1) Morris, S.; Nguyen, T.; Zheng, N. Visible light mediated cycloaddition reactions. In *Visible Light Photocatalysis in Organic Chemistry*, Stephenson, C. R. J., Yoon, T. P., MacMillan, D. W. C. Eds.; Wiley-VCH, 2018; pp 129-158.

(2) Ozkizilcik, A.; Williams, R.; Tian, Z. R.; Muresanu, D. F.; Sharma, A.; Sharma, H. S. Synthesis of Biocompatible Titanate Nanofibers for Effective Delivery of Neuroprotective Agents. In *Neurotrophic Factors: Methods and Protocols*, Skaper, S. D. Ed.; Methods in Molecular Biology, Vol. 1727; Humana Press, 2018; pp 433-442.

2017 (n=5)

(1) Ozkizilcik, A.; Davidson, P.; Turgut, H.; Sharma, H. S.; Sharma, A.; Tian, Z. R. Nanocarriers as CNS drug delivery systems for enhanced neuroprotection. In *Drug and Gene Delivery to the Central Nervous System for Neuroprotection: Nanotechnological Advances*, Sharma, H. S., Muresanu, D. F., Sharma, A. Eds.; Springer International Publishing, 2017; pp 33-55.

(2) Sharma, A.; Menon, P. K.; Patnaik, R.; Muresanu, D. F.; Lafuente, J. V.; Tian, Z. R.; Ozkizilcik, A.; Castellani, R. J.; Moessler, H.; Sharma, H. S. Novel Treatment Strategies Using TiO₂-Nanowired Delivery of Histaminergic Drugs and Antibodies to Tau With Cerebrolysin for Superior Neuroprotection in the Pathophysiology of Alzheimer's Disease. In *Nanomedicine in Central Nervous System Injury and Repair*, Sharma, H. S., Sharma, A. Eds.; International Review of Neurobiology, Vol. 137; Elsevier Academic Press Inc, 2017; pp 123-165.

(3) Sharma, A.; Muresanu, D. F.; Lafuente, J. V.; Ozkizilcik, A.; Tian, Z. R.; Buzoianu, A. D.; Sharma, H. S. Sleep deprivation induced blood-brain barrier breakdown and brain pathology. Neuroprotective effects of TiO₂-nanowired delivery of cerebrolysin and ondansetron. In *Drug and Gene Delivery to the Central Nervous System for Neuroprotection: Nanotechnological Advances*, Sharma, H. S., Muresanu, D. F., Sharma, A. Eds.; Springer International Publishing, 2017; pp 127-178.

(4) Sharma, H. S.; Patnaik, R.; Muresanu, D. F.; Lafuente, J. V.; Ozkizilcik, A.; Tian, Z. R.; Nozari, A.; Sharma, A. Histaminergic Receptors Modulate Spinal Cord Injury-Induced Neuronal Nitric Oxide Synthase Upregulation and Cord Pathology: New Roles of Nanowired Drug Delivery for Neuroprotection. In *Nanomedicine in Central Nervous System Injury and Repair*, Sharma, H. S., Sharma, A. Eds.; International Review of Neurobiology, Vol. 137; Elsevier Academic Press Inc, 2017; pp 65-98.

(5) Stenken, J. A.; Patton, S. L. Microdialysis flux considerations. In *Compendium of In Vivo Monitoring in Real-Time Molecular Neuroscience, Volume 2: Microdialysis and Sensing of Neural Tissues*, Wilson, G. S., Michael, A. C. Eds.; World Scientific Publishing, 2017; pp 337-374.

2016 (n=1)

(1) Wilkins, C. L. A History of Ion Cyclotron Resonance (ICR) and Fourier Transform (FTICR) Mass Spectrometry. In *Encyclopedia of Mass Spectrometry*, Gross, M. L., Caprioli, R. M. Eds.; Elsevier, 2016; pp 61-67.

2015 (n=3)

(1) Jenkins, S. V.; Muldoon, T. J.; Chen, J. Plasmonic nanostructures for biomedical and sensing applications. In *Metallic Nanostructures: From Controlled Synthesis to Applications*, Xiong, Y., Lu, X. Eds.; Springer, 2015; pp 133-173.

(2) Stenken, J. A.; Elkins, M. Measurement of cytokines in the brain. In *Compendium of In Vivo Monitoring in Real-Time Molecular Neuroscience, Volume 1: Fundamentals and Applications*, Wilson, G. S., Michael, A. C. Eds.; World Scientific Publishing, 2015; pp 369-400.

(3) Wilkins, C. L. Charles Lee Wilkins. In *Encyclopedia of Mass Spectrometry*, Gross, M. L., Caprioli, R. M. Eds.; Elsevier, 2015; pp 233-234.

2014 (n=2)

(1) Chen, J. Noble Metal Nanoparticle Platform. In *Cancer Theranostics*, Chen, X., Wong, S. Eds.; Academic Press, 2014; pp 327-346.

(2) Hu, H.; Ma, Z.; Wang, F. On the Transferability of Three Water Models Developed by Adaptive Force Matching. In *Annual Reports in Computational Chemistry*, Wheeler, R. A. Ed.; Vol. 10; Elsevier, 2014; pp 25-43.

Review (n=36)

2023 (n=3) – up to November

- (1) Andrews, J.; Gan, Q. L.; Fan, C. G. "Not-so-popular" orthogonal pairs in genetic code expansion. *Protein Science* **2023**, 32 (2), Review. DOI: 10.1002/pro.4559.
- (2) Fatema, N.; Fan, C. Studying lysine acetylation of citric acid cycle enzymes by genetic code expansion. *Molecular Microbiology* **2023**, 119 (5), 551-559, Review. DOI: 10.1111/mmi.15052.
- (3) Sauve, S.; Williamson, J.; Polasa, A.; Moradi, M. Ins and Outs of Rocker Switch Mechanism in Major Facilitator Superfamily of Transporters. *Membranes* **2023**, 13 (5), Review. DOI: 10.3390/membranes13050462.

2022 (n=4)

- (1) Adams, P. D.; Muhoza, D. Targeting K-Ras Mutations Show Promise Towards Ending Ras's "Undruggable" Era. *Protein and Peptide Letters* **2022**, 29 (12), 1007-1015, Review. DOI: 10.2174/0929866529666221003124202.
- (2) Alraawi, Z.; Banerjee, N.; Mohanty, S.; Kumar, T. K. S. Amyloidogenesis: What Do We Know So Far? *International Journal of Molecular Sciences* **2022**, 23 (22), Review. DOI: 10.3390/ijms232213970.
- (3) Fatema, N.; Ceballos, R. M.; Fan, C. Modifications of cellulose-based biomaterials for biomedical applications. *Frontiers in Bioengineering and Biotechnology* **2022**, 10, Review. DOI: 10.3389/fbioe.2022.993711.
- (4) Filbrun, S. L.; Zhao, F.; Chen, K. C.; Huang, T. X.; Yang, M.; Cheng, X. D.; Dong, B.; Fang, N. Imaging Dynamic Processes in Multiple Dimensions and Length Scales. *Annual Review of Physical Chemistry* **2022**, 73, 377-402, Review. DOI: 10.1146/annurev-physchem-090519-034100.

2021 (n=5)

- (1) Agrawal, S.; Maity, S.; AlRaawi, Z.; Al-Ameer, M.; Kumar, T. K. S. Targeting Drugs Against Fibroblast Growth Factor(s)-Induced Cell Signaling. *Current Drug Targets* **2021**, 22 (2), 214-240, Review. DOI: 10.2174/1389450121999201012201926.
- (2) Chen, H.; Wilson, J.; Ottinger, S.; Gan, Q.; Fan, C. Introducing noncanonical amino acids for studying and engineering bacterial microcompartments. *Current Opinion in Microbiology* **2021**, 61, 67-72, Review. DOI: 10.1016/j.mib.2021.03.004.

- (3) Lay, J. O.; Liyanage, R.; Gidden, J. A. The Development of a High-Resolution Mass Spectrometry Method for Ultra-Trace Analysis of Chlorinated Dioxins in Environmental and Biological Samples Including Viet Nam Era Veterans. *Mass Spectrometry Reviews* **2021**, *40* (3), 236-254, Review. DOI: 10.1002/mas.21639.
- (4) Phan, P.; Saikia, B. B.; Sonnaila, S.; Agrawal, S.; Alraawi, Z.; Kumar, T. K. S.; Iyer, S. The Saga of Endocrine FGFs. *Cells* **2021**, *10* (9), Review. DOI: 10.3390/cells10092418.
- (5) Ren, H.; Edwards, M. A. Stochasticity in single-entity electrochemistry. *Current Opinion in Electrochemistry* **2021**, *25*, Review. DOI: 10.1016/j.coelec.2020.08.014.

2020 (n=3)

- (1) Chen, H.; Gan, Q.; Fan, C. Methyl-Coenzyme M Reductase and Its Post-translational Modifications. *Frontiers in Microbiology* **2020**, *11*, Review. DOI: 10.3389/fmicb.2020.578356.
- (2) Hu, J. Y.; Gupta, S. K.; Ozdemir, J.; Beyzavi, M. H. Applications of Dynamic Covalent Chemistry Concept toward Tailored Covalent Organic Framework Nanomaterials: A Review. *ACS Applied Nano Materials* **2020**, *3* (7), 6239-6269, Review. DOI: 10.1021/acsanm.0c01327.
- (3) Zhang, J. G.; Xu, W.; Xiao, J.; Cao, X.; Liu, J. Lithium Metal Anodes with Nonaqueous Electrolytes. *Chemical Reviews* **2020**, *120* (24), 13312-13348, Review. DOI: 10.1021/acs.chemrev.0c00275.

2019 (n=4)

- (1) DeNike, K. A.; Kilyanek, S. M. Deoxydehydration of vicinal diols by homogeneous catalysts: a mechanistic overview. *Royal Society Open Science* **2019**, *6* (11), Review. DOI: 10.1098/rsos.191165.
- (2) Maity, S.; Gundampati, R. K.; Kumar, T. K. S. NMR Methods to Characterize Protein-Ligand Interactions. *Natural Product Communications* **2019**, *14* (5), 17, Review. DOI: 10.1177/1934578x19849296.
- (3) Ozdemir, J.; Mosleh, I.; Abolhassani, M.; Greenlee, L. F.; Beitle, R. R.; Beyzavi, M. H. Covalent Organic Frameworks for the Capture, Fixation, or Reduction of CO₂. *Frontiers in Energy Research* **2019**, *7*, Review. DOI: 10.3389/fenrg.2019.00077.
- (4) Venkat, S.; Chen, H.; Gan, Q.; Fan, C. The Application of Cell-Free Protein Synthesis in Genetic Code Expansion for Post-translational Modifications. *Frontiers in Pharmacology* **2019**, *10*, Review. DOI: 10.3389/fphar.2019.00248.

2018 (n=5)

- (1) Ahrens, C. J.; Grundy, W. M.; Mandt, K. E.; Cooper, P. D.; Umurhan, O. M.; Chevrier, V. F. Recent Advancements and Motivations of Simulated Pluto Experiments. *Space Science Reviews* **2018**, *214* (8), Review. DOI: 10.1007/s11214-018-0558-6.
- (2) Chen, H.; Venkat, S.; McGuire, P.; Gan, Q.; Fan, C. Recent Development of Genetic Code Expansion for Posttranslational Modification Studies. *Molecules* **2018**, *23* (7), Review. DOI: 10.3390/molecules23071662.
- (3) Granone, L. I.; Sieland, F.; Zheng, N.; Dillert, R.; Bahnemann, D. W. Photocatalytic conversion of biomass into valuable products: a meaningful approach? *Green Chemistry* **2018**, *20* (6), 1169-1192, Review. DOI: 10.1039/c7gc03522e.
- (4) McKay, M. J.; Afroze, F.; Koeppe, R. E.; Greathouse, D. V. Helix formation and stability in membranes. *Biochimica et Biophysica Acta-Biomembranes* **2018**, *1860* (10), 2108-2117, Review. DOI: 10.1016/j.bbamem.2018.02.010.
- (5) Sakamaki, Y.; Ozdemir, J.; Heidrick, Z.; Watson, O.; Shahsavari, H. R.; Fereidoonnezhad, M.; Khosropour, A. R.; Beyzavi, M. H. Metal-Organic Frameworks and Covalent Organic Frameworks as Platforms for Photodynamic Therapy. *Comments on Inorganic Chemistry* **2018**, *38* (6), 238-293, Review. DOI: 10.1080/02603594.2018.1542597.

2017 (n=3)

- (1) Lochala, J. A.; Zhang, H. Z.; Wang, Y. S.; Okolo, O.; Li, X. F.; Xiao, J. Practical Challenges in Employing Graphene for Lithium-Ion Batteries and Beyond. *Small Methods* **2017**, *1* (6), Review. DOI: 10.1002/smtd.201700099.
- (2) Venkat, S.; Gregory, C.; Gan, Q.; Fan, C. Biochemical Characterization of the Lysine Acetylation of Tyrosyl-tRNA Synthetase in Escherichia coli. *ChemBioChem* **2017**, *18* (19), 1928-1934, Review. DOI: 10.1002/cbic.201700343.
- (3) Zheng, J. M.; Lochala, J. A.; Kwok, A.; Deng, Z. Q. D.; Xiao, J. Research Progress towards Understanding the Unique Interfaces between Concentrated Electrolytes and Electrodes for Energy Storage Applications. *Advanced Science* **2017**, *4* (8), Review. DOI: 10.1002/advs.201700032.

2016 (n=4)

- (1) Morris, S. A.; Wang, J.; Zheng, N. The Prowess of Photogenerated Amine Radical Cations in Cascade Reactions: From Carbocycles to Heterocycles. *Accounts of Chemical Research* **2016**, *49* (9), 1957-1968, Review. DOI: 10.1021/acs.accounts.6b00263.

(2) Sharma, A.; Menon, P.; Muresanu, D. F.; Ozkizilcik, A.; Tian, Z. R.; Lafuente, J. V.; Sharma, H. S. Nanowired Drug Delivery Across the Blood-Brain Barrier in Central Nervous System Injury and Repair. *CNS & Neurological Disorders-Drug Targets* **2016**, *15* (9), 1092-1117, Review. DOI: 10.2174/1871527315666160819123059.

(3) Wu, B. B.; Wang, S. Y.; Evans, W. J.; Deng, D. Z.; Yang, J. H.; Xiao, J. Interfacial behaviours between lithium ion conductors and electrode materials in various battery systems. *Journal of Materials Chemistry A* **2016**, *4* (40), 15266-15280, Review. DOI: 10.1039/c6ta05439k.

(4) Xiang, C. X.; Weber, A. Z.; Ardo, S.; Berger, A.; Chen, Y. K.; Coridan, R.; Fountaine, K. T.; Haussener, S.; Hu, S.; Liu, R.; et al. Modeling, Simulation, and Implementation of Solar-Driven Water-Splitting Devices. *Angewandte Chemie-International Edition* **2016**, *55* (42), 12974-12988, Review. DOI: 10.1002/anie.201510463.

2015 (n=3)

(1) Martfeld, A. N.; Rajagopalan, V.; Greathouse, D. V.; Koeppe, R. E. Dynamic regulation of lipid-protein interactions. *Biochimica et Biophysica Acta-Biomembranes* **2015**, *1848* (9), 1849-1859, Review. DOI: 10.1016/j.bbamem.2015.01.019.

(2) Paul, D. W.; Stenken, J. A. A review of flux considerations for in vivo neurochemical measurements. *Analyst* **2015**, *140* (11), 3709-3730, Review. DOI: 10.1039/c4an01898b.

(3) Stenken, J. A.; Poschenrieder, A. J. Bioanalytical chemistry of cytokines - A review. *Analytica Chimica Acta* **2015**, *853*, 95-115, Review. DOI: 10.1016/j.aca.2014.10.009.

2014 (n=2)

(1) Ponnappakkam, T.; Katikaneni, R.; Sakon, J.; Stratford, R.; Gensure, R. C. Treating osteoporosis by targeting parathyroid hormone to bone. *Drug Discovery Today* **2014**, *19* (3), 204-208, Review. DOI: 10.1016/j.drudis.2013.07.015.

(2) Sharma, H. S.; Menon, P.; Lafuente, J. V.; Muresanu, D. F.; Tian, Z. R.; Patnaik, R.; Sharma, A. Development of in vivo drug-induced neurotoxicity models. *Expert Opinion on Drug Metabolism & Toxicology* **2014**, *10* (12), 1637-1661, Review. DOI: 10.1517/17425255.2014.970168.

Patent (n=33)

2023 (n=2) – up to November

- (1) Chen, J.; Greenlee, L. F.; Manso, R. H.; Acharya, P.; Crane, C. C. Metal Oxide Core-shell Nanoparticles And Applications Thereof. US 11655552 B2 2023-05-23, 2023.
- (2) Sakon, J.; Roeser, J.; Bauer, R. T.; Janowska, K.; Tanaka, K.; Matsushita, O.; Uchida, K. Collagen-binding Agent Compositions And Methods Of Using The Same. US 11624060 B2 2023-04-11, 2023.

2022 (n=4)

- (1) Coridan, R. H.; Lowe, J. M. Light-directed electrochemical patterning of copper structures. US 11214885 B2 2022-01-04, 2022.
- (2) Ponnappakkam, T.; Philominathan, S. T. L.; Sakon, J.; Katikaneni, R.; Koide, T.; Matsushita, O.; Gensure, R. C.; Nishi, N. Delivery of therapeutic agents by a collagen binding protein. US 11279922 B2 2022-03-22, 2022.
- (3) Striegler, S. Chiral Binuclear Metal Complexes For Stereoselective Hydrolysis Of Saccharides And Glycosides. US 11439993 B2 2022-09-13, 2022.
- (4) Thallapuram, S. K.; Agrawal, S.; Gundampati, R. K.; Jayanthi, S.; Wang, T.; Jones, J.; Kolenc, O.; Lam, N. T.; Niyonshuti, I.; Balachandran, K.; et al. Engineered FGF1 and FGF2 compositions and methods of use thereof. US 11267855 B2 2022-03-08, 2022.

2021 (n=3)

- (1) Coridan, R. H.; Norman, M. A.; Perez, W. Hierarchically nanostructured films and applications thereof. US 11127536 B2 2021-09-21, 2021.
- (2) Ponnappakkam, T.; Philominathan, S. T. L.; Sakon, J.; Katikaneni, R.; Koide, T.; Matsushita, O.; Gensure, R. C.; Nishi, N. Delivery of therapeutic agents by a collagen binding protein. US 11001820 B2 2021-05-11, 2021.
- (3) Tian, Z. R.; Turgut, H. Composite membranes and applications thereof. US 10894235 B2 2021-01-19, 2021.

2020 (n=5)

- (1) Coridan, R. H.; Lowe, J. M. Light-directed electrochemical patterning of copper structures. US 10793965 B2 2020-10-06, 2020.
- (2) Coridan, R. H.; Norman, M. A.; Perez, W. Hierarchically nanostructured films and applications thereof. US 10629385 B2 2020-04-21, 2020.
- (3) Fritsch, I.; Parette, D.; Khan, F. Z. Magnetohydrodynamic microfluidic systems including modified electrodes and methods of using the same. US 10641732 B2 2020-05-05, 2020.
- (4) Kilyanek, S. M.; Thapa, R. N-heterocyclic carbene (NHC) based ligands and related methods. US 10843178 B2 2020-11-24, 2020.
- (5) Striegler, S. Chiral binuclear metal complexes for stereoselective hydrolysis of saccharides and glycosides. US 10870103 B2 2020-12-22, 2020.

2019 (n=7)

- (1) Beitle Jr, R.; Mukherjee, R. P.; Thallapuram, S. K.; Sakon, J.; McNabb, D. S. Cleavage resistant photoluminescent proteins and applications thereof. US 10442842 B2 2019-10-15, 2019.
- (2) Gensure, R. C.; Sakon, J.; Matsushita, O.; Ponnapakkam, T. Fusion proteins of collagen-binding domain and parathyroid hormone. US 10202434 B2 2019-02-12, 2019.
- (3) Gensure, R. C.; Sakon, J.; Matsushita, O.; Ponnapakkam, T. Fusion proteins of collagen-binding domain and parathyroid hormone. US 10358471 B2 2019-07-23, 2019.
- (4) Gensure, R. C.; Sakon, J.; Matsushita, O.; Ponnapakkam, T. Fusion proteins of collagen-binding domain and parathyroid hormone. US 10519213 B2 2019-12-31, 2019.
- (5) Kumar, T. K. S.; Jayanthi, S.; Morris, J.; Brown, A. D.; McNabb, D. S.; Henry, R. Heparin affinity tag and application thereof. US 10280196 B2 2019-05-07, 2019.
- (6) Kumar, T. K. S.; Zaharoff, D. A.; Jayanthi, S.; Koppolu, B.; Kerr, R.; Balachandran, K.; McNabb, D. S. Engineered FGF compositions and methods of use thereof. US 10385113 B2 2019-08-20, 2019.
- (7) Ponnapakkam, T.; Philominathan, S. T. L.; Sakon, J.; Katikaneni, R.; Koide, T.; Matsushita, O.; Gensure, R. C. Delivery of therapeutic agents by a collagen binding protein. US 10213488 B2 2019-02-26, 2019.

2017 (n=4)

- (1) Kumar, T. K. S.; Jayanthi, S.; Morris, J.; Brown, A. D.; McNabb, D. S.; Henry, R. L. Heparin affinity tag and applications thereof. US 9676816 B2 2017-06-13, 2017.
- (2) Kumar, T. K. S.; McNabb, D. S.; Akkam, Y. H.; Nguyen, D. T. Peptides with antifungal activity and methods of using the peptides. US 9556226 B2 2017-01-31, 2017.
- (3) Peng, X.; Li, J.; Battaglia, D. M.; Wang, Y. A.; Wang, Y. Monodisperse core/shell and other complex structured nanocrystals and methods of preparing the same. US 9850426 B2 2017-12-26, 2017.
- (4) Ponnappakkam, T.; Philominathan, S. T. L.; Sakon, J.; Katikaneni, R.; Koide, T.; Matsushita, O.; Gensure, R. C. Delivery of therapeutic agents by a collagen binding protein. US 9579273 B2 2017-02-28, 2017.

2016 (n=4)

- (1) Gensure, R. C.; Sakon, J.; Matsushita, O.; Ponnappakkam, T. Fusion proteins of collagen-binding domain and parathyroid hormone. US 9528099 B2 2016-12-27, 2016.
- (2) Peng, X.; Li, J.; Battaglia, D.; Wang, Y. A.; Wang, Y. Monodisperse core/shell and other complex structured nanocrystals and methods of preparing the same. US 9340726 B2 2016-05-17, 2016.
- (3) Peng, X.; Xie, R. Metal doped semiconductor nanocrystals and methods of making the same. US 9260652 B2 2016-02-16, 2016.
- (4) Ponnappakkam, T.; Philominathan, S. T. L.; Sakon, J.; Katikaneni, R.; Koide, T.; Matsushita, O.; Gensure, R. C. Delivery of therapeutic agents by a collagen binding protein. US 9526765 B2 2016-12-27, 2016.

2015 (n=1)

- (1) Gensure, R. C.; Sakon, J.; Matsushita, O.; Ponnappakkam, T. Fusion proteins of collagen-binding domain and parathyroid hormone. US 9062300 B2 2015-06-23, 2015.

2014 (n=3)

- (1) Peng, X.; Li, J.; Battaglia, D.; Wang, Y. A.; Wang, Y. Monodisperse core/shell and other complex structured nanocrystals and methods of preparing the same. US 8900481 B2 2014-12-02, 2014.
- (2) Peng, X.; Li, Z. Colloidal semiconductor nanocrystals having 1-dimensional quantum confinement and methods of making the same. US 8658065 B2 2014-02-25, 2014.

(3) Tian, Z. R. TiO₂ nanostructures, membranes and films, and methods of making same. US 8883115 B2 2014-11-11, 2014.

Conference Proceedings (n=27)

2020 (n=1)

- (1) Adams, P. D.; Solorzano, X. D.; Lo, W.; Gattis, C. S.; Popp, J. S. Closing the STEM Labor Gap through a Path to Graduation for Low Income, Rural Students. In 2020 ASEE Virtual Annual Conference, Virtual; 2020.

2019 (n=3)

- (1) Gattis, C. S.; Solorzano, X. D.; Nix, D.; Popp, J. S.; Cleary, M.; Lo, W.; Hill, B.; Adams, P. D. Work in Progress: A Path to Graduation: Helping First-Year Low Income, Rural STEM Students Succeed. In 2019 ASEE Annual Conference and Exposition, Tampa, Florida; 2019.
- (2) Meyer, M.; Bakermans, C.; Beaty, D.; Bernard, D.; Boston, P.; Chevrier, V.; Conley, C.; Feustel, I.; Gough, R.; Glotch, T.; et al. Report of the Joint Workshop on Induced Special Regions. In 42nd Scientific Assembly of the Committee-on-Space-Research (COSPAR), Pasadena, CA; 2019.
- (3) Omolewu, A.; Shi, G.; Tian, R.; Meng, X.; Wejinya, U. Optical and Atomic Force Microscopy Study of Noncovalently functionalized CVD Graphene. In 14th IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS 2019), Bangkok, Thailand; 2019.

2018 (n=5)

- (1) Alismail, H.; Du, Y.; Zhou, J.; Tian, Z. R. A cell-sensory bioscaffold of biocompatible titanate nanofiber. In 11th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 20th Annual Nanotech Conference and Expo, the 2018 SBIR/STTR Spring Innovation Conference, and the Defense TechConnect DTC Spring Conference, Anaheim, CA, USA; 2018.
- (2) Farris, H. N.; Conner, M. B.; Chevrier, V. F.; Rivera-Valentin, E. G. Adsorption driven regolith-atmospheric water vapor transfer on Mars: An analysis of Phoenix TECP data. In 6th International Conference on Mars Polar Science and Exploration, Reykjavik, Iceland; 2018.
- (3) Omolewu, A.; Martsching, B.; Shi, G.; Tian, Z. R.; Meng, X.; Wejinya, U. Atomic Force Microscopy Study of Surfactant Treated CVD Graphene. In 12th IEEE International Conference on Nano/Molecular Medicine and Engineering (IEEE-NANOMED 2018), Waikiki, Hawaii; 2018.
- (4) Sharma, A.; Muresanu, D. F.; Lafuente, J. V.; Zhang, Z.-Q.; Li, C.; Patnaik, R.; Tian, Z. R.; Ozikzilcik, A.; Sharma, H. S. Nanodelivery of Chinese traditional medicine extract of Gingko Biloba (EGb-761) induces superior neuroprotection following traumatic brain injury in heat stroke. In 11th Annual TechConnect World Innovation

Conference and Expo, Held Jointly with the 20th Annual Nanotech Conference and Expo, the 2018 SBIR/STTR Spring Innovation Conference, and the Defense TechConnect DTC Spring Conference, Anaheim, CA, USA; 2018.

(5) Sharma, A.; Muresanu, D. F.; Lafuente, J. V.; Nozari, A.; Patnaik, R.; Ozkizilcik, A.; Tian, Z. R.; Mossier, H.; Sharma, H. S. Co-administration of TiO₂ nanowired cerebrolysin and alpha-melanocyte stimulating hormone has superior neuroprotective effects on brain pathology following concussive head injury after Sleep deprivation. In 11th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 20th Annual Nanotech Conference and Expo, the 2018 SBIR/STTR Spring Innovation Conference, and the Defense TechConnect DTC Spring Conference, Anaheim, CA, USA; 2018.

2017 (n=4)

(1) Muresanu, D. F.; Sharma, A.; Lafuente, J. V.; Nozari, A.; Patnaik, R.; Ozkizilcik, A.; Tian, Z. R.; Mossier, H.; Sharma, H. S. Neuroprotective effects of cerebrolysin in exacerbation of blood-brain barrier breakdown, neuropathology and upregulation of nitric oxide synthase and hemeoxygenase in diabetes and hypertension after heat stroke. In 11th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 20th Annual Nanotech Conference and Expo, and the 2017 National SBIR/STTR Conference, Washington, DC, USA; 2017.

(2) Sharma, A.; Menon, P. K.; Muresanu, D. F.; Lafuente, J. V.; Nozari, A.; Patnaik, R.; Ozkizilcik, A.; Tian, Z. R.; Mossler, H.; Sharma, H. S. Nanodelivery of cerebrolysin reduces functionalized Gold Nanoparticles induced Blood-brain barrier disruption, brain edema formation and brain pathology. In 11th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 20th Annual Nanotech Conference and Expo, and the 2017 National SBIR/STTR Conference, Washington, DC, USA; 2017.

(3) Sharma, A.; Muresanu, D. F.; Lamente, J. V.; Nozari, A.; Patnaik, R.; Ozkizilcik, A.; Tian, Z. R.; Mossier, H.; Sharma, H. S. TiO₂-nanowired delivery of cerebrolysin thwarts exacerbation of sleep deprivation induced decline in regional brain derived neurotrophic factor, brain pathology and behavioral dysfunctions following emotional stress. In 11th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 20th Annual Nanotech Conference and Expo, and the 2017 National SBIR/STTR Conference, Washington, DC, USA; 2017.

(4) Sharma, H. S.; Muresanu, D. F.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Ozkizilcik, A.; Castellani, R. J.; Mossier, H.; Sharma, A. Nanodelivery of cerebrolysin reduces depressive stress induced exacerbation of Alzheimer's disease brain pathology following amyloid-beta peptide infusion. In 11th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 20th Annual Nanotech Conference and Expo, and the 2017 National SBIR/STTR Conference, Washington, DC, USA; 2017.

2016 (n=6)

(1) Abraham, G.; Tejerina, A.; Churchill, H.; Bajwa, P.; Heyes, C.; Herzog, J. B. Plasmonically enhanced photoluminescence of nanoscale semiconductors. In Quantum Dots and Nanostructures: Growth, Characterization and Modeling XIII, San Francisco, CA, USA; 2016.

- (2) Hutcheson, J. A.; Khan, F. Z.; Powless, A. J.; Benson, D.; Hunter, C.; Fritsch, I.; Muldoon, T. J. A light sheet confocal microscope for image cytometry with a variable linear slit detector. In High-Speed Biomedical Imaging and Spectroscopy: Toward Big Data Instrumentation and Management, San Francisco, CA; 2016.
- (3) Muresanu, D. F.; Sharma, A.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Ozkizilcik, A.; Mossier, H.; Sharma, H. S. TiO₂ Nanowired Cerebrolysin reduces neuron-specific ubiquitin carboxyl-terminal esterase-L1 (UCHL1) in Alzheimer's Disease and brain pathology. In 10th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 19th Annual Nanotech Conference and Expo, and the 2016 National SBIR/STTR Conference, Washington, DC, USA; 2016.
- (4) Sharma, A.; Muresanu, D. F.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Ozkizilcik, A.; Mossier, H.; Sharma, H. S. Nanodelivery of drugs for therapeutic strategies in CNS disorders. Current and Future perspectives. In 10th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 19th Annual Nanotech Conference and Expo, and the 2016 National SBIR/STTR Conference, Washington, DC, USA; 2016.
- (5) Sharma, H. S.; Muresanu, D. F.; Lafuente, J. V.; Ozkizilcik, A.; Tian, Z. R.; Patnaik, R.; Mossier, H.; Sharma, A. Timed release of cerebrolysin using titanate nanospheres induces neuroprotection in Parkinson's Disease. In 10th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 19th Annual Nanotech Conference and Expo, and the 2016 National SBIR/STTR Conference, Washington, DC, USA; 2016.
- (6) Sharma, H. S.; Muresanu, D. F.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Ozkizilcik, A.; Mossier, H.; Sharma, A. Nanodelivery of Cerebrolysin in combination with neprilysin induces neuroprotection in Alzheimer's Disease pathology following brain injury. In 10th Annual TechConnect World Innovation Conference and Expo, Held Jointly with the 19th Annual Nanotech Conference and Expo, and the 2016 National SBIR/STTR Conference, Washington, DC, USA; 2016.

2015 (n=4)

- (1) Abraham, G.; French, D. A.; Bajwa, P.; Heyes, C. D.; Herzog, J. B. Optical enhancement of photoluminescence with colloidal quantum dots. In Nanoengineering: Fabrication, Properties, Optics and Devices XII, San Diego, CA; 2015.
- (2) Hutcheson, J.; Powless, A.; Majid, A.; Claycomb, A.; Fritsch, I.; Balachandran, K.; Muldoon, T. High-throughput microfluidic line scan imaging for cytological characterization. In Microfluidics, BioMEMS and Medical Microsystems XIII, San Francisco, CA; 2015.
- (3) Janowski, T.; Pulay, P. Efficient calculation of the perturbational triples contributions in coupled cluster theory. In Proceedings of the International Conference of Computational Methods in Sciences and Engineering 2010 (ICCMSE-2010), Kos, Greece; 2015.
- (4) Powless, A. J.; Jenkins, S. V.; McKay, M. L.; Jingyi, C.; Muldoon, T. J. Molecule-specific darkfield and multiphoton imaging using gold nanocages. In Reporters, Markers, Dyes, Nanoparticles and Molecular Probes for Biomedical Applications VII, San Francisco, CA, USA; 2015.

2014 (n=4)

- (1) Sharma, A.; Muresanu, D. F.; Lafuente, J. V.; Menon, P.; Patnaik, R.; Tian, Z. R.; Mossler, H.; Sharma, H. S. Nanodelivery of cerebrolysin as adjunct therapy with functionalized magnetic iron oxide nanoparticles enhances neuroprotection following whole body hyperthermia. In Nanotechnology 2014: Graphene, CNTs, Particles, Films and Composites, Technical Proceedings of the NSTI Nanotechnology Conference and Expo, Washington, DC, USA; 2014.
- (2) Sharma, H. S.; Feng, L.; Lafuente, J. V.; Murasau, D. F.; Tian, Z. R.; Patnaik, R.; Sharma, A. Nanowired delivery of mesenchymal stem cell reduces diabetes induced aggravation brain damage following heatstroke. In Nanotechnology 2014: Graphene, CNTs, Particles, Films and Composites, Technical Proceedings of the NSTI Nanotechnology Conference and Expo, Washington, DC, USA; 2014.
- (3) Sharma, H. S.; Muresanu, D. F.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Moessler, H.; Sharma, A. TiO₂-nanowired cerebrolysin attenuated hyperthermia induced ubiquitin overexpression and brain pathology. In Nanotechnology 2014: Graphene, CNTs, Particles, Films and Composites, Technical Proceedings of the NSTI Nanotechnology Conference and Expo, Washington, DC, USA; 2014.
- (4) Sharma, H. S.; Muresanu, D. F.; Lafuente, J. V.; Patnaik, R.; Tian, Z. R.; Mossler, H.; Sharma, A. Nanodrug delivery by single-walled carbon nanotubes (SWCNTs) in the central nervous system induces neurotoxicity. Potential neuroprotective effects of cerebrolysin. In Nanotechnology 2014: Graphene, CNTs, Particles, Films and Composites, Technical Proceedings of the NSTI Nanotechnology Conference and Expo, Washington, DC, USA; 2014.

Preprint (n=19)

- (1) Cherry, R.; Muhanga, J. J.; Mehrabi, H.; Conlin, S. K.; Coridan, R. H. Monolithic light concentration by core-shell TiO₂ nanostructures templated by monodisperse polymer colloidal monolayers. *ChemRxiv* **2023**, 1-22, Preprint. DOI: 10.26434/chemrxiv-2023-02d10.
- (2) Czaplinski, E. C.; Gilbertson, W. A.; Farnsworth, K. K.; Chevrier, V. F. Experimental study of ethylene evaporites under titan conditions. *arXiv.org, e-Print Archive, Astrophysics* **2020**, 1-33, Preprint. DOI: 10.48550/arxiv.2002.04978.
- (3) DeMouplied, J. R.; Killenbeck, J. A.; Schichtl, Z. G.; Sharma, B.; Striegler, S.; Coridan, R. H. Solvent-induced inversion of colloidal aggregation during electrophoretic deposition. *ChemRxiv* **2022**, 1-21, Preprint. DOI: 10.26434/chemrxiv-2022-dz3j4.
- (4) Emran, A.; Chevrier, V. F. Uncertainty in grain size estimations of volatiles on trans-neptunian objects (TNOs) and kuiper belt objects (KBOs). *arXiv.org, e-Print Archive, Astrophysics* **2021**, 1-11, Preprint. DOI: 10.48550/arxiv.2110.14591.
- (5) Emran, A.; Chevrier, V. F. Discrepancy in grain size estimation of H₂O ice in the outer solar system and the interstellar medium. *arXiv.org, e-Print Archive, Astrophysics* **2022**, 1-15, Preprint. DOI: 10.48550/arxiv.2204.04192.
- (6) Emran, A.; Dalle Ore, C. M.; Ahrens, C. J.; Khan, M. K. H.; Chevrier, V. F.; Cruikshank, D. P. Pluto's surface mapping using unsupervised learning from nearinfrared observations of LEISA/Ralph. *arXiv.org, e-Print Archive, Astrophysics* **2023**, 1-50, Preprint. DOI: 10.48550/arxiv.2301.06027.
- (7) Emran, A.; Marzen, L. J.; King Jr, D. T.; Chevrier, V. F. Thermophysical and compositional analyses of dunes at Hargraves crater, Mars. *arXiv.org, e-Print Archive, Astrophysics* **2021**, 1-29, Preprint. DOI: 10.48550/arxiv.2109.05711.
- (8) Hu, H.; Ma, Z.; Wang, F. On the transferability of three water models developed by adaptive force matching. *arXiv.org, e-Print Archive, Physics* **2015**, 1-27, Preprint. DOI: 10.48550/arxiv.1501.07204.
- (9) Hu, J.; Nikravesh, M.; Shahsavari, H. R.; Aghakhanpour, R. B.; Rheingold, A. L.; Alshami, M.; Sakamaki, Y.; Beyzavi, M. H. A C^N cycloplatinated(II) fluorido complex: photophysical studies and Csp3-F bond formation. *ChemRxiv* **2020**, 1-27, Preprint. DOI: 10.26434/chemrxiv.12756227.v1.
- (10) Karash, S.; Liyanage, R.; Qassab, A.; Lay, J. O., Jr.; Kwon, Y. M. A comprehensive assessment of the genetic determinants in *Salmonella Typhimurium* for resistance to hydrogen peroxide using proteogenomics. *bioRxiv, Microbiology* **2017**, Preprint. DOI: 10.1101/115360.
- (11) Kumar, P.; Chevrier, V. F. Solubility of nitrogen in methane, ethane, and mixtures of methane and ethane at Titan-like conditions: a molecular dynamics study. *arXiv.org, e-Print Archive, Condensed Matter* **2019**, 1-11, Preprint. DOI: 10.48550/arxiv.1910.13343.

- (12) Kumar, P.; Chevrier, V. F. Pressure and temperature dependence of solubility and surface adsorption of nitrogen in the liquid hydrocarbon bodies on Titan. *arXiv.org, e-Print Archive, Condensed Matter* **2020**, 1-9, Preprint. DOI: 10.48550/arxiv.2002.07126.
- (13) Kumar, V. G.; Ogden, D. S.; Isu, U. H.; Polasa, A.; Losey, J.; Moradi, M. Differential dynamic behavior of prefusion spike proteins of SARS coronaviruses 1 and 2. *bioRxiv* **2020**, 1-42, Preprint. DOI: 10.1101/2020.12.25.424008.
- (14) Mehrabi, H.; Conlin, S. K.; Hollis, T. I.; Gattis, B. S.; Weker, J. N.; Coridan, R. H. Electrochemical control of the morphology and functional properties of hierarchically structured, dendritic Cu surfaces. *ChemRxiv* **2022**, 1-33, Preprint. DOI: 10.26434/chemrxiv-2022-l1vrw.
- (15) Ogden, D. S.; Moradi, M. Atomic-level characterization of the conformational transition pathways in SARS-CoV-1 and SARS-CoV-2 spike proteins. *bioRxiv* **2022**, 1-33, Preprint. DOI: 10.1101/2022.11.29.518406.
- (16) Rogers, A.; Niyonshuti, I. I.; Ou, J.; Shrestha, D.; Chen, J.; Wang, Y. Wavelength dependence of laser-induced nanowelded microstructures assembled from metal nanoparticles. *arXiv.org, e-Print Archive, Physics* **2023**, Preprint. DOI: 10.48550/arxiv.2302.10746.
- (17) Tian, Z. R. Nanoparticles' and atoms' geometry-wave potential unified properties. *ChemRxiv* **2019**, 1-15, Preprint. DOI: 10.26434/chemrxiv.9759551.
- (18) Tian, Z. R. Surface curvature-quantized energy in spacetime-geometrized chemical physics. *ChemRxiv* **2020**, 1-16, Preprint. DOI: 10.26434/chemrxiv.11495811.
- (19) Zong, G.; Hu, Z.; O'Keefe, S.; Tranter, D.; Iannotti, M. J.; Baron, L.; Hall, B.; Corfield, K.; Paatero, A. O.; Henderson, M. J.; et al. Ipomoeassin F binds Sec61 α to inhibit protein translocation. *ChemRxiv* **2019**, 1-25, Preprint. DOI: 10.26434/chemrxiv.7581764.

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