



Groupe Français de
Photochimie,
Photophysique et
Photosciences (GFP2P)



Gruppo Italiano di Fotochimica
(GIF)



Société Française de
Photobiologie (SFPb)



Società Italiana di Fotobiologia
(SIFB)

First Joint Congress of the French and Italian Photochemists and Photobiologists



Bari, Ex-Palazzo delle Poste
September 19 – 22, 2016

Booklet of Abstracts

First Joint Congress of the French and Italian Photochemists and Photobiologists

Joint Meeting of the



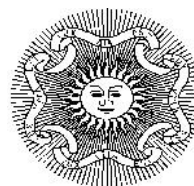
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Société Française de Photobiologie (SFPb)



Società Italiana di Fotobiologia (SIFB)

**Bari, Ex-Palazzo delle Poste
September 19-23, 2016**

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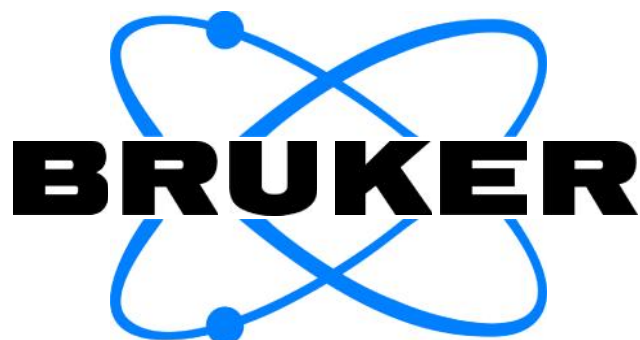
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Istituto per i Processi Chimico-Fisici - CNR sede di Bari

Via Orabona, 4 - 70126 Bari

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Conference Program

Monday 19th September

14.00 Opening Ceremony

Chairperson: E. Sage

14.45 **Plenary: J. Piette** (Liège, BE) *RIP3 antagonizes a TSC 2-mediated pro-survival pathway in Photodynamic therapy-induced glioblastoma cell death*

15.30 **P. Arnoux** (Nancy, FR) *New trends in photodynamic therapy*

15.45 **A. Mazzaglia** (Messina, IT) *Folate-decorated amphiphilic cyclodextrin/pheophorbide nanoassemblies for targeted PDT*

15.45 **É. Ishow** (Nantes, FR) *Hybrid multimodal nanoparticles as nano swiss-knives for diagnostics*

16.15 **M. Bocé** (città) *Efficient NO release by trans- and cis-(Cl,Cl)-[Ru^{II}(FT)Cl₂(NO)](PF₆) under excitation in the NIR region*

16.30 **D. Vione** (Torino, IT) *Photochemical reactions in sunlit lake waters*

16.45 **COFFEE BREAK**

Photochemistry

Chairperson: S. Sortino

17.15 **Keynote (PhD Prize): R. Mazzarro** (Bologna, IT) *Solar energy conversion performed by solution-processed silicon nanocrystals*

17.45 **F. Loiseau** (Grenoble, FR) *A Ruthenium(ii)–Copper(ii) dyad for the photocatalytic oxygenation of organic substrates mediated by dioxygen*

18.00 **E. La Mazza** (Messina, IT) *Ultrafast energy transfer in a new dendritic antenna based on a new 1,3,5-triazine ligand*

18.15 **M. Marchini** (Bologna, IT) *Pimerization drives supramolecular polymerization of a shape-persistent tetrahedral molecule bearing four bipyridinium units*

18.30 **P. Changenet-Barret** (Palaiseau, FR) *Conformational relaxation of 1,1'-Bi(2-naphthol) derivatives probed by subpicosecond circular dichroism*

18.45 **M. Natali** (Ferrara, IT) *Photoinduced Charge Separation in Porphyrin Ion-Pairs*

Photobiology

Chairperson: M. Sliwa

Keynote: D. Kirilovsky (Gif-sur-Yvette, FR) *The Photoactive Orange Carotenoid Protein and Photoprotection in Cyanobacteria*

C. Brunet (Napoli, IT) *Photodefence responses of coastal diatoms: role of light spectrum*

M. Landi (Pisa, IT) *Physiological response of red versus green morphs of sweet basil to high solar irradiances: what type of photoprotection?*

D. Piano (Cagliari, IT) *The S-layer as a UV-radiation shield: the case of Deinococcus radiodurans and its S-layer Deinoxanthin Binding Complex*

M. Jaubert (Paris, FR) *Diatom phytochromes reveal the existence of far-red light based sensing in the ocean*

S. la Gatta (Bari, IT) *Heptamethine cyanine dyes working as light harvesting antennas in biohybrid photosynthetic assemblies*

Tuesday 20th September

Photochemistry

Chairperson: S. Campagna

- 09.00 **Keynote (GIF YIA): F. Monti** (Bologna, IT) *Luminescent transition-metal complexes for lighting*
- 09.30 **Keynote (GIF YIA): D. Ravelli** (Pavia, IT) *Photocatalytic Hydrogen Atom Transfer (HAT) reactions in synthesis*
- 9.45
- 10.00 **M. La Rosa** (Bologna, IT) *Photoactive Nanohybrids Based on Chemically Functionalized Semiconductor Quantum Dots*
- 10.15 **C. Raviola** (Pavia, IT) *Photochemistry of 2-halothiophenes: a journey from heteroaryl radical to heteroaryl cation*
- 10.30 **T. M. G. Salerno** (Messina, IT) *Localization-controlled two-colour luminescence imaging via environmental modulation of energy transfer in a BODIPY dyad*

10.45 COFFEE BREAK

Chairperson: E. Sage

- 11.15 **Keynote: P. Pallavicini** (Pavia, IT) *Gold nanostars: versatile nanoparticles for photothermal action and two-photon luminescence tracking*
- 10.30 **N. D. McClenaghan** (Talence, FR) *Message in a Bubble: Phototriggered Events in Microdomains*
- 10.30 **H.-P. Lassalle** (Nancy, FR) *Characterization of PAMAM-Ce6 dendrimeric nanoparticles for photodynamic treatment*
- 10.30 **R. Méallet-Renault** (Orsay, FR) *Luminescent Superhydrophobic surfaces for anti-microbial adhesion and anti-biofilm applications*
- 10.30 **M. Erard** (Orsay, FR) *Quantitative analysis of protein-protein interactions in live cell using the new generation of cyan fluorescent proteins. Application to the NADPH oxidase complex*

Photobiology

Chairperson: G. Miolo

- Keynote: M. D. Galibert** (Rennes, FR) *Ultraviolet Radiation: "Dr. Jekyll or Mr Hyde"?*
- A. Ferino** (Udine, IT) *Role of the NF- κ B/Snail/RKIP loop in the response to PDT treatment in pancreatic carcinoma cells*
- P. Marchesani** (San Giovanni Rotondo, IT) *Laser therapies for treating chronic pain and for increasing wellbeing*
- J. Bertrand** (Orsay, FR) *UVB represses melanocytes cell migration through S-catenin*
- J.-P. Souchard** (Toulouse, FR) *Synthesis, physico-chemical properties, cellular penetration and photodynamic antiproliferative activity on MCF7 breast cancer cell line of new rose bengal-estradiol conjugates*
- A. Bour** (Paris, FR) *Photo-induced oxidation of bio-mimetic membranes*

12.45 **LUNCH**

Chairperson: D. Bassani

- 14.15 **Keynote: M. Sliwa** (Villeneuve d'Ascq, FR) *Ultrafast photodynamics of photo-switchable fluorescent proteins: ultrafast absorption spectroscopy and serial femtosecond crystallography*
- 14.45 **C. Mastrodonato** (Talence, FR) *New quadrupolar dyes as sensitive pH probes for two-photon imaging*
- 15.00 **J. Manzi** (Bologna, IT) *Real-time pH measurements in growing inorganic structures by fluorescence imaging*
- 15.15 **A. Espagne** (Paris, FR) *Ultrafast Dynamics of a GFP Chromophore Analogue: Competition between Excited-State Proton Transfer and Torsional Relaxation*

15.30 **COFFEE BREAK**

- 16.00 **R. Chahboune** (Aubière, FR) *Hydrogen Peroxide as an efficient photo-inducer for the complete degradation of organic pollutants: kinetics and analytical studies*
- 16.15 **M. Liberi** - *Bruker Sponsored presentation*

16.30 **POSTER FLASH PRESENTATION**

17.15 **POSTER SESSION**

18.30 **GENERAL ASSEMBLY OF SOCIETIES**

Wednesday 21st September

Chairperson: A. Credi

- 09.00 **Plenary: L. De Cola** (Strasbourg, FR) *Seeing, understanding and controlling self-assembly of luminescent species*
- 09.45 **V. Peings** (Pau, FR) *Coupling photocatalysts and ferrate oxidation: towards an innovative solution for wastewater treatment*
- 10.00 **I. Grigioni** (Milano, IT) *The exchange of photogenerated charge carriers between WO_3 and $BiVO_4$ in coupled $WO_3/BiVO_4$ systems*
- 10.15 **F. Milano** (Bari, IT) *The photoelectrochemical domain of bacterial photosynthesis*
- 10.30 **M. Baroncini** (Bologna, IT) *An artificial molecular pump powered by light energy*

10.45 **COFFEE BREAK**

- 11.15 **Keynote: T. Douki** (Grenoble, FR) *Recent advances in the formation of DNA damage by UV radiation: from test tube experiments to human skin*
- 11.45 **E. Bignon** (Villeurbanne, FR) *Modelling the structure and triplet-triplet energy transfer of the 6-4 photoproduct*
- 12.00 **Lara Martinez-Fernandez** (Napoli, IT) *Photophysical and photochemical processes in AT-DNA: insights from Quantum Mechanical calculations*
- 12.15 **H. Gattuso** (Vandoeuvre-les-Nancy, FR) *Two-photon-absorption DNA photosensitization, modeling the production of solvated electrons*
- 12.30 **T. Gustavsson** (Gif-sur-Yvette, FR) *Effect of methylation on cytosine*

12.45 **LUNCH**

Photochemistry

Chairperson: C. Vever-Bizet

- 14.15 **Marta Penconi** (Milano, IT) *Degradation mechanism in Flrpic: blue phosphorescent OLED emitter*
- 14.30 **C. Remy** (Cachan, FR) *Synthesis and spectroscopic studies of fluorescent molecular receptors for the detection of atrazine and melamine derivatives*
- 14.45 **L. Ravotto** (Bologna, IT) *Shining light on benzodipyrrens: from NIR-emissive complexes to hydroperoxide sensing and “dial-a-color” fluorescence*
- 15.00 **F. Romano** (Bologna, IT) *Water-Soluble Photoluminescent Silicon Quantum Dots*
- 15.15 **S. Lazzaroni** (Pavia, IT) *Vegetable oils-derived resins for stereolithography*

Photobiology

Chairperson: P. Vicendo

- F. Barra** (Napoli, IT) *Photodynamic Therapy with 5-Aminolaevulinic Acid and Nuclear Injury: Role of ABCG2 in Preventing DNA damage*
- G. Rea** (Roma, IT) *Photochemical characterization of Chlamydomonas mutants for biotechnological applications*
- G. Sed** (Roma, IT) *Study and development of photobioreactors (PBRs) analyzing geometry effects on microalgal biomass growth in residual light*
- F. Palomba** (Bologna, IT) *Mastering Surface Interaction of New Theranostic Nanomaterials*
- S. Ruscigno** (Bari, IT) *Mucus-penetrating lipid nanovesicles for pulmonary drug delivery*

15.30 **COFFEE BREAK**

Photochemistry

Chairperson: G. Bour-Heckley

- 1600 **Keynote: M. Brigante** (Clermont-Ferrand, FR) *Understanding the role of chemistry in atmospheric water: the key role of photochemists*
- 16.30 **V. Rizzi** (Bari, IT) *Photoactive chitosan films*
- 16.45 **A. Bianco** (Clermont-Ferrand, FR) *Photochemistry in cloud waters: reactivity and fate of organic compounds*
- 17.00 **J. Chauvin** (Grenoble, FR) *Photocatalytic reduction of CO₂ mediated by [Os(diimine)(CO)₂Cl₂] precursor catalyst*

Photobiology

Chairperson: T. Gustavsson

- Keynote: G. Romano** (Firenze, IT) *Ingestible device for intragastric PDT against Helicobacter pylori*
- S. Manfredini** (Ferrara, IT) *Oxisol: a new dualistic molecule endowed with very potent antioxidant and uv-booster properties for skin photo-oxidative protection*
- R. Boudjemaa** (Orsay, FR) *Micro to nanometric optical imaging resolution to better understand bacterial biofilms persistence: in vitro and in vivo visualization and characterization of antibiotics action*
- S. Lembo** (Salerno, IT) *Light-independent pro-inflammatory and pro-oxidant effects of purified human hair melanins on keratinocyte cell cultures*

- 17.15 **G. Ragazzon** (Bologna, IT) *Fluorescence lifetime measurements and pH titrations as tools to expand the knowledge on a switchable [2]rotaxane*
- 17.15 **H. Azaari** (Rabat, MA) *Influence of parameters in photocatalytic degradation of chloridazon herbicide in aqueous solution*
- 17.15 **M. Venturini** (Brescia, IT) *Daylight Photodynamic Therapy in the treatment of mild and/or moderate Actinic Keratosis of the face and/or the scalp*
- 17.15 **A. Zanca** (Brescia, IT) *Reflectance confocal microscopy allows in vivo real-time noninvasive assessment of the outcome of methyl aminolaevulinate photodynamic therapy of basal cell carcinoma*
- 18.00 **SOCIAL EVENT AND DINNER**

Thursday 22nd September

Photochemistry

Chairperson: R. Méallet-Renault

- 09.00 **Keynote: R. Métivier** (Cachan, FR) *Enhanced fluorescence photoswitching in multichromophoric molecules and nanosystems*
- 09.30 **O. Soppera** (Mulhouse, FR) *Molecularly imprinted polymers for sensor applications by photopolymerization*
- 09.45 **D. Vona** (Bari, IT) *Photonic platforms and fluorescent mesoporous scaffold: diatoms as a new tool for materials*
- 10.00 **B. Storti** (Pisa, IT) *Interlacing biophysical methods to unveil morphology and dynamical interactions with microtubules of transient receptor potential vanilloid 1 (TRPV1) at nanoscale in living cells*
- 10.15 **G. Longobucco** (Ferrara, IT) *Emerging Pollutants Photo-Oxidation by WO₃*
- 10.30 **M. Louis** (Cachan, FR) *Bistable mechanofluorochromic materials based on difluoroboron S-diketone dyes*

Photobiology

Chairperson: E. Reddi

- Keynote: F. Quaglia** (Napoli, IT) *Polymeric nanoparticles for combined photo/chemo-therapy*
- S. Bonneau** (Paris, FR) *Berberine as a Photosensitizing Agent for Antitumoral Photodynamic Therapy: Insights into its Association to Low Density Lipoproteins*
- E. Caruso** (Varese, IT) *Photodynamic activity of a diarylic-porphyrin linked to a biocompatible polymeric nanostructure*
- S. Mariano** (Lecce, IT) *In vivo and in vitro comparative study of uptake of silver and gold nanoparticles exploitable in the context of photodynamic therapy*
- F. Mammano** (Padova, IT) *Effects of focal photodynamic therapy on cancer cells in vitro and in mouse models in vivo*
- G. Zampini** (Perugia, IT) *Nanomodulation of singlet oxygen and bacterial inactivation efficiency by silica-PpIX nanocomposites*

10.45 **COFFEE BREAK**

Chairperson: F. Fusi

11.15 **Keynote: R. Pini** (Sesto Fiorentino, IT) *Photo-active plasmonic nanoparticles for biomedical applications*

11.45 **S. Fery-Forgues** (Toulouse, FR) *Conjugates of benzoxazole and GFP chromophores with AIE behavior: polymorphism, rigidochromism, nanoparticles and cell uptake*

12.00 **R. Grasso** (Catania, IT) *Delayed luminescence spectroscopy from human glioblastoma cells to monitor the effects of drug-loaded nanostructured lipid carrier*

12.15 **J. Boucard** (Nantes, FR) *Photo- and magneto-activity tuning of bimodal hybrid nanoassemblies as contrast agents*

12.30 **F. Petronella** (Bari, IT) *Novel multifunctional nanocrystalline UV and Visible light active photocatalysts for environmental applications*

12.45 **CLOSING REMARKS**