

Amgen Seminar Series in Chemical Engineering
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Simulations of biomolecular assembly processes at interfaces

By



Dr. Jeetain Mittal
Dept of Chemical and Biomolecular Engineering
Lehigh University

Although biomolecular folding, binding, and assembly are usually conceived of as occurring in a bulk aqueous solution, there are numerous instances of such processes occurring near interfaces within cells. Examples of these interfaces include very large macromolecules, membranes bounding intracellular compartments and the cell membrane itself. Interfacial behavior of biomolecules is also important in several technological applications such as DNA-based nanomaterials, biosensors, and microarrays. In this talk, I will discuss several ongoing research problems in my group that illustrate rich behavior exhibited by biomolecules (protein, DNA) at interfaces.

Bio: Jeetain Mittal received his doctorate in chemical engineering from the University of Texas, Austin, his master's degree in chemical engineering from the Indian Institute of Technology and his bachelor's degree, also in chemical engineering, from Punjab Technical University. Prior to joining Lehigh, he worked as a postdoctoral research fellow at the Laboratory of Chemical Physics at the National Institutes of Health.

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