

Speaker Profile



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Mohammad F. Islam is an Assistant Professor with joint appointments in Chemical Engineering and Materials Science and Engineering and a courtesy appointment in Physics. He received his Ph.D. in Physics from Lehigh University in 2000 focusing on aggregation and adsorption behavior of polyelectrolytes. He then moved to the department of Physics and Astronomy at the University of Pennsylvania in 2002. There he worked on colloidal systems and carbon nanotubes. His work on carbon nanotube dispersion was recognized as one of the top 1% cited papers published by American Chemical Society in 2003. He joined Carnegie Mellon faculty in 2005. Since 2005, he has received several awards: National Science Foundation CAREER award (2007), the Sloan Research Fellowship (2007), the Kavli Fellowship (2008), and George Tallman Ladd Research Award (2009).

His current research interests are to experimentally investigate the microscopic structure and dynamics of synthetic and biological soft matter to better understand traditional concepts such as phase transitions, self-assembly and the relationship between microscopic structure and macroscopic properties. He also applies his expertise in soft matter to challenges in nanoscience to answer fundamental scientific questions. Farther, he employs both soft- and nanomaterials approaches to engineer multifunctional materials with tailored optical, electrical, thermal and mechanical properties. These unique materials have diverse applications in areas such as photonics, fuel cells, supercapacitors, drug delivery vessels, scaffolds for tissue engineering, etc.

