



# MOLECULAR FOUNDRY



a DOE-funded nanoscience research facility that provides users from around the world with free\* access to cutting-edge expertise and instrumentation in a collaborative, multidisciplinary environment

## Seven collaborative facilities provide users with unique research resources:



**Organic and Macromolecular Synthesis Facility** studies "soft" materials, including the synthesis of organic molecules, macromolecules, polymers and their assemblies, with access to functional systems, photoactive materials, organic-inorganic hybrid structures, and porous materials.



**Biological Nanostructures Facility** This facility designs and synthesizes new materials based on the self-assembly of biopolymers and bio-inspired polymers, creates new nanocrystal probes for bioimaging, and develops synthetic biology techniques to re-engineer organisms and create hybrid biomolecules to interface with a variety of applications.



**Inorganic Nanostructures Facility** is devoted to the science of semiconductor, carbon and hybrid nanostructures—including design, synthesis, and combinatorial discovery of nanocrystals, nanowires, and nanotubes and their self-assembly into 3D mesoscale functional materials for use-inspired energy applications.



**Theory of Nanostructured Materials Facility** expands our understanding of materials and phenomena at the nanoscale through development and application of theories and methods for excited-state and charge transport at nanoscale interfaces, self-assembly of nanostructures, and X-ray spectroscopy in complex nanostructured systems.



**Nanofabrication Facility** focuses on understanding and applying advanced lithographies, thin film deposition, and characterization, emphasizing integration of inorganic, organic, and biological nanosystems with the potential for nanoelectronic, nanophotonic, and energy applications.



**Imaging and Manipulation of Nanostructures Facility** develops and provides access to state-of-the-art characterization and manipulation of nanostructured materials – from "hard" to very "soft" matter – including electron, optical, and scanning probe microscopies.



**National Center for Electron Microscopy (NCEM)** focuses on the cutting-edge instrumentation, techniques and expertise required for advanced electron beam characterization of materials at high spatial resolution.

The Molecular Foundry user program gives researchers free\* access for up to one year and is open to scientists from academia, industry, and research institutes worldwide through a brief, peer-reviewed proposal.

\*for non-proprietary research



<http://foundry.lbl.gov>

