

Professor Jackie Y. Ying

NanoBio Lab



Nanostructured Materials for Energy and Biomedical Applications

Wednesday, August 1, 2018
66-110 - 10:00 AM

Abstract: Nanostructured materials can be designed with sophisticated features to fulfill the complex requirements of advanced material applications. This talk describes the synthesis of metallic, metal oxide, semiconducting and organic nanoparticles and nanocomposites of controlled size, morphology and architecture. The nanocrystalline building blocks are used to create excellent materials for catalytic, fuel cell and battery applications. We have also designed and functionalized nanostructured materials for drug delivery, nanomedicine, biosensor, cell culture substrate and tissue engineering applications. The unique properties of the various nanostructured materials synthesized will be presented in this lecture.

Jackie Y. Ying received her B.E. and Ph.D. from The Cooper Union and Princeton University, respectively. She joined the faculty at Massachusetts Institute of Technology in 1992, where she was Professor of Chemical Engineering until 2005. She was the Founding Executive Director of the Institute of Bioengineering and Nanotechnology in Singapore (2003-2018). She currently leads the NanoBio Lab as A*STAR Senior Fellow. For her research on nanostructured materials, Prof. Ying has been recognized with the American Ceramic Society Ross C. Purdy Award, David and Lucile Packard Fellowship, Office of Naval Research Young Investigator Award, National Science Foundation Young Investigator Award, Camille Dreyfus Teacher-Scholar Award, American Chemical Society Faculty Fellowship Award in Solid-State Chemistry, Technology Review's Inaugural TR100 Young Innovator Award, American Institute of Chemical Engineers (AIChE) Allan P. Colburn Award, Singapore National Institute of Chemistry-BASF Award in Materials Chemistry, Wall Street Journal Asia's Asian Innovation Silver Award, International Union of Biochemistry and Molecular Biology Jubilee Medal, Materials Research Society Fellowship, Royal Society of Chemistry Fellowship, Crown Prince Grand Prize in the Brunei Creative, Innovative Product and Technological Advancement (CIPTA) Award, American Institute for Medical and Biological Engineering Fellowship, Academy of Sciences of [Iran](#) Medal of Honor, American Association for the Advancement of Science Fellowship, Islamic World Academy of Sciences-COMSTECH Ibrahim Memorial Award, Singapore National Academy of Science Fellowship, The Cooper Union Alumni Association Gano Dunn Award, The Cooper Union Alumni Hall of Fame, Abdeali Tayebali Lifetime Achievement Award, and U.S. National Academy of Inventors Fellowship.