

Title Nanostructured and Templated Polymer Materials and Interfaces

Speaker Prof. Rigoberto C. Advincula
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Date & Time Monday, July 24, 2017 2:00 p.m.

Place Meeting room, 2nd floor, I2CNER Bldg.1, Ito campus,
 Kyushu University

Abstract

The preparation of new polymers and nanomaterials require hierarchical levels of ordering and structuring: from molecular to macroscopic. The tools and methods available for evincing this order require design principles that start from non-covalent interactions all the way to object patterns that can be manipulated by non-lithographic methods. The ability to synthesize and fabricate new macromolecules and layered ordered systems result in new material stimuli-responsive properties. This talk will highlight the research philosophy and research methods used by our group to produce systems that include: 1) supramolecularly template knotty polymers, 2) electropolymerized molecularly imprinted sensors, 3) electronanopatterning, 4) colloidal nanosphere lithography, and, 5) multilayer shape-stimuli patterned objects and particles. What is also important is the use of surface sensitive spectroscopic and microscopic analytical tools applied rationally to highlight evidence of order and function.

About the Speaker

Prof. Rigoberto Advincula, Ph.D. is Professor at the Department of Macromolecular Science and Engineering, Case Western Reserve University in Cleveland, Ohio, USA. He is a Fellow of the American Chemical Society (ACS), Fellow of the Polymer Science and Engineering Division (ACS), Fellow of the Polymer Chemistry Division (ACS). He received the distinguished Herman Mark Scholar Award in 2013 and was elected to the World Economic Forum Future Materials Research Council in 2016. He served as past Chair of the Polymer Division, ACS. He is Editor of Reactive and Functional Polymers and recent Associate Editor of Polymer Reviews. His group does research in polymer materials, nanomaterials, colloidal science, 3D printing and ultrathin films towards applications from smart coatings to biomedical devices.

Host: Professor Atsushi Takahara

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