

## **Advanced Material Chemistry Lecture Series 2018**

**Title of Lecture:** 3D Printing High Performance Materials and Nanocomposites

**Speaker:** Professor Rigoberto Advincula  
Department of Macromolecular Science and Engineering  
Case Western Reserve University, USA

**Date:** December 17, 2018

**Venue:** Room 1004/4, 10th Floor, Mahamakut Bldg., Faculty of Science,  
Chulalongkorn University

**Time:** 14.00- 17.00

**Abstract:** Polymers and Plastics are synonymous in many applications and everyday things. This lecture will focus on bridging the knowledge gap and appreciation for the properties of polymer materials when applied to additive manufacturing methods and 3D printing. Polymer chemists and plastics engineers will find the requirements for performance limits most 3D printing objects as prototypes rather than replacement parts. The participant will learn the new developments in coatings technologies, packaging, and the use of new high-performance polymers, smart additives and formulations methods including nanomaterials. Another is in finding new applications in tooling, parts replacement, molds, and high build volume applications that are becoming the realm of digital manufacturing.