

BioSyM Seminar Series 2017

Synthesis and fabrication of polymer / nanohybrids for biomedical applications

Dr. Abhinay Mishra

Senior Postdoctoral Associate

Singapore-MIT Alliance for Research and Technology

Email: abhinay@smart.mit.edu

Date : 28th August 2017, Monday
Time : 12 pm to 1 pm
Venue : Level 5, Perseverance Room



Abstract

Synthesis and fabrication of polymer / nanohybrid scaffolds has gained tremendous attention in recent years due to its applications in drug delivery, tissue engineering and cell biology applications. In this talk , I will describe the synthesis and characterization of bio-stable thermoplastic polyisobutylene based polyurethanes for cardiovascular implants and the effect of nanoclays on the properties of biodegradable polyurethanes. In addition, I will discuss about the synthesis of gold-polymer nano-architectures via SI-ATRP polymerization for biosensing and detection applications. Finally, I will illustrate the fabrication of well-defined gelatin scaffolds through 3D printing or direct laser writing for bacteria interaction studies.

Short Biography

Dr. Abhinay recently joined SMART - BioSyM. He received his M.Tech. and Ph.D.in Materials Science and Technology in 2008 and 2012, respectively from Indian Institute of Technology (BHU), Varanasi. He then moved to US and worked as a Postdoctoral Associate in a joint project between University of Massachusetts and Boston Scientific Corporation from 2012 to 2014. In 2014, he moved to Singapore and worked in Nanyang Technological University as a Research Fellow from 2014 to 2017.