V O R T R A G - L E C T U R E

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Department of Biotechnology and Food Engineering
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Location: House 1 – Room 019 C # Wed, 24 Oct. 2012 # 3:30 pm

Session: Biotechnological Applications

Porous Silicon-Based Multiphase and Multiscale Hybrids

Organic – inorganic hybrids with controlled morphology at the nanometer scale represent an exciting class of materials that can display unique properties that are culminated by the characteristics of each building block. Recent research highlights their potential application in biosensing, lab-on-chip devices, drug delivery, and tissue engineering. Our research is focused on the design of hybrid materials, which integrate polymer with nanostructured in organic scaffolds e.g., Ge nanowires and porous Si (PSi), for advanced “smart” functions. PSi is an appealing biomaterial due to ease in tuning its many attractive properties: pore morphology, photonic properties, biocompatibility, biodegredation, and surface chemistry. The talk will present of the principle concepts of design and fabrication of PSi-polymer hybrids and current applications in optical biosensing, lab-on-chip devices and drug delivery.

Guest are very welcome!