Dr. Alamgir Karim is currently Dow Professor of Chemical & Biomolecular Engineering at University of Houston. Prof. Karim is a pioneer researchers in the filed of polymer thin films, surfaces and interfaces. His primary research interests include polymer nanocomposite thin films, blends phase separation, block copolymer ordering, nanoparticle patterning and combinatorial materials science.

Prior to the present affiliation, Prof. Karim was Goodyear Chair Professor in University of Akron from 2008 to 2017 where he had many important responsibilities including Institute Director and Associate Dean of Research in the College of Polymer Science & Engineering. Prof. Karim is fellow of American Physical Society (APS) and American Association for Advancement of Sciences. Prof. Karim is also Editor-in-chief of Springer publication, Emergent Materials. Prof. Karim is an outstanding researcher and has more than 320 publications including many in top-rated international journals like PNAS, PRL, Nature Materials, Advanced Materials to name a few with an impressive h-index of 60 with total citations ~13,000.

Dr. Chandra Shekhar Sharma is an Associate Professor in the Department of Chemical Engineering at IIT Hyderabad. His research interests are carbon thin films and 3-D hierarchical structures, nature inspired functional surfaces, electrospun polymer and carbon nanofibers. Prof. Sharma has 54 peer-reviewed international journal publications to his credit.

Prof. Sharma has received several awards including NASI Young Scientist (2017), SERB Indo-Us Fellowship (2016), IEI Young Engineer (2016), DST INSPIRE Faculty (2015), GYTI Award (2014 and 2015).

Global Initiative on Academic Network (GIAN)

5 days course on

Nanostructured Polymer Thin Film Properties

July 9-13, 2018

भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Venue:
Indian Institute of Technology, Hyderabad
https://www.iith.ac.in/~gian/

COURSE OVERVIEW

The fundamental understanding of polymer thin film structure and how different interactions play a role in defining the morphology and properties of such nanostructured films is key to designing polymer thin films for functional applications ranging from membranes to sensors. To this end, the course will cover major categories of polymer thin film phenomena including polymer wettability and dewetting, surface energy and surface tension, polymer blends phase separation thermodynamics and kinetics, polymer crystallization and block copolymer ordering behavior. The role of polymer nanocomposites as an attractive materials platform for fabricating nanostructured hybrid films with potential applications in nanomaterial-based technologies with a view towards the fundamental thermodynamics and kinetics will be discussed. The use of polymeric structures for carbon based materials will be covered.

COURSE OBJECTIVES

The primary objectives of the course are as follows:

i) Exposing participants to the fundamentals of polymer surfaces, interfaces, thin films as well as polymer nanocomposites

ii) Learning the fundamentals of polymer interactions with surfaces, learning about polymer thin films and interfacial structure

iii) Developing a knowledge base of polymer nanocomposite (PNC) systems and carbon based structures

iv) Understanding the interactions and how they can be used to control PNC and carbon based materials morphology

v) Understanding the processing aspects related various polymer thin film phenomena and likewise for PNCs and carbon based structures

iii) Providing exposure to practical problems and their solutions in polymer surfaces interfaces and thin films, PNCs and carbon structures through case studies

IMPORTANT DATES

Last date for registration: June 20, 2018 (Limited Seats)
Confirmation to participants: June 25, 2018
Course dates: July 9-13, 2018

REGISTRATION DETAILS

Registration Fee:
For Students: 1000 INR
For participants from academic institutes, Govt. R&D Labs: 5,000 INR
For participants from industry: 8,000 INR
For foreign students: USD 300

Registration fee includes access to attend all lectures and tutorials, course materials, wi-fi, tea/coffee and water for all five days.

For hostel accommodation on sharing basis and meals (breakfast, lunch and dinner), ALL participants need to pay additional fee of 3000 INR for all five days. For hotel accommodation, please write to coordinator directly.

For online registration (with or without additional fee), use the link below: http://www.iith.ac.in/~gian/carbonlab

Direct Link:
https://docs.google.com/forms/d/e/1FAIpQLSdW-aKUUkVYgf8EBCiVOCgkB9LVwfTpeZjWMB5kC7Lp9hEQIw/viewform

EVALUATION & GRADING

There will be an evaluation during the course on the understanding of the concepts and problem solving. Accordingly, a letter grade will be awarded. A completion certificate will also be provided.

Contact us

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