

Thermal Processing Technology Center Tour @ IIT and ASM Student Poster Contest and Scholarship Night

“Introduction to the Thermal Processing Technology Center at IIT”
Prof. Philip Nash, Director TPTC

Abstract

Professor Nash will give a brief introduction to the current research projects and capabilities of the Thermal Processing Technology Center. The research projects include titanium powder metallurgy, bainite transformation kinetics, mechanical properties of heat affected zone in HPS 100W, process simulation, silver/carbon nanotube composites and thermodynamic measurements in structural and functional materials. The talk will be followed by a brief tour of the laboratory facilities including the Gleeble 3500.

Biography

Professor Philip Nash received his B.Sc. in Metallurgy in 1973 from City of London Polytechnic and his PhD in Materials Science in 1978 from Queen Mary College, University of London, U.K. After graduation he worked as a postdoctoral research associate at Imperial College, University of London, with Professor David West, on the experimental determination of ternary nickel-base alloy phase diagrams. In 1981 he was appointed as an Assistant Professor at Illinois Institute of Technology (IIT) in Chicago, Illinois, USA. Since 1991 he has been a Professor of Metallurgical Engineering in the Mechanical, Materials and Aerospace Engineering Department and also serves as the Director of the Thermal Processing Technology Center at IIT. He served as the category editor for the nickel binary alloy systems and co-category editor for the nickel ternary systems in the ASM/NBS Phase Diagram Evaluation program. He is a Fellow of ASM International and an Editor of Journal of Materials Science.

Professor Nash's research is in the area of physical metallurgy and has included particle coarsening, experimental determination of phase diagrams and experimental thermodynamics. In recent years he has also worked on bainite transformation kinetics, precipitation in aluminum alloys, titanium powder metallurgy and metal matrix/carbon nanotube composites. He has advised about 100 graduate students including 30 PhD students.

Student Poster Contest: *Current Participant List:*

Northern Illinois University

- “Laser Assisted Machining (Turning) of Ceramics”, Mike Matusky
- “Shapphire Clear Armor”, Eric Hoffmann
- “Nano-metal polymer composite hybrid”, Patricia Hurney

Tuesday
April 13, 2010

- “Tensile Strength of Materials associated with Human Powered Vehicles”, Michael Colwell
- “The Failure Analysis of the Estonia”, Joe Vierthaler

Illinois Institute of Technology

- "Assessment of the effectiveness of the transition metals in hardening Ni solid solution", Bin Gan
- "Effect of Cr on the solidification and microstructure of Ni-Al-Nb eutectic superalloys", Mengtao Xie
- "Synthesis and sintering for the low cost Ti6Al4V powder metallurgy components", Xiaoyan XU
- "Phase change materials", Hong Trang Huynh
- “Thermodynamic Properties of Heusler Alloys”, Yoonsung Chung
- "The effect of Ru addition on the mechanical properties of TiAl alloys", Qizheng Liu
- "Mechanical Properties and Deformation Mechanisms on Ternary Eutectic Nickel Base Superalloys For Turbine Disks", Alejandro Rodriguez

Locations:

Student Poster Contest and TPTC Tour/Talk

Illinois Institute of Technology
10W. 32nd Street
E1 building, Room 119
Chicago, IL 60616

Award & Dinner

House of Fortune
2407 South Wentworth Avenue
Chicago, IL 60616-2201
(312) 225-0880

Tentative Schedule:

4:30-5:30 pm Executive Committee Meeting
5:30-6:30 pm Poster Selection
6:30-7:30 pm Meeting and Tour (Room 119 IIT)
7:30 pm Award and Dinner

Directions:

IIT is located on the South side of Chicago right off of State Street. .

***** RSVP by Thursday, April 8th, 2010 *****

Pre-registration by Thursday prior to meeting: \$25. Registration at door: \$35

Pre-registration for Students: Free. Registration at door for Students: \$5

To make your reservation, please go to <http://www.chicagoasm.org/>