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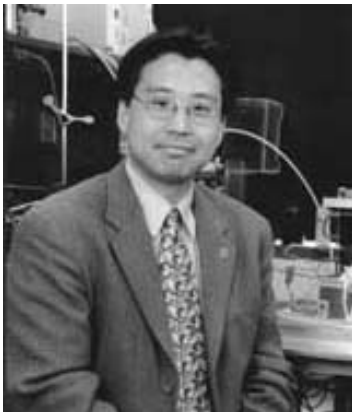
“Nanomaterial Synthesis by Chemical Vapor Deposition”

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Friday, September 30, 2005, 11:00am
Room 250 Light Engineering

Abstract

Chemical vapor deposition (CVD) is a ubiquitous material synthesis technique used to create a variety of materials from anti-glare coatings to nanostructured materials. With use dating back to the 1880's, CVD was instrumental in enabling the semiconductor and photonics industry in the 1990's. There is currently a strong thrust to create new nanomaterials by chemical vapor deposition at both the fundamental research and application level. After providing an overview of the technical challenges involved in understanding CVD as a potential tool for nanomanufacturing, this seminar will highlight several current research programs using CVD to create nanometer-thin films and carbon nanotubes using an enclosureless (open-air) CVD system.



About the Speaker

Wilson K. S. Chiu joined the University of Connecticut in August 1999 where he is now Associate Professor with tenure in the Mechanical Engineering Department. He received his B.S., M.S. and Ph.D. in Mechanical Engineering from Rutgers University in 1994, 1997 and 1999, respectively. His research involves both numerical and experimental studies in the transport phenomena for the synthesis and processing of nanostructured materials. Applications include nanomanufacturing using chemical vapor deposition (CVD) for carbon nanotube, fuel cell, photonics and semiconductor manufacture. Dr. Chiu has over 80 technical and conference publications, and 3 patents pending. He is an active member of the Heat Transfer Division of ASME, SPIE, and ECS. Dr. Chiu is a recipient of the National Science Foundation CAREER Award and the Young Investigator Award from the Office of Naval Research in 2001, and the Army Research Office Young Investigator Award in 2005.