

SPECIAL POINTS OF INTEREST:

- > New Members:
- > Featuring MPIF:
- > Upcoming Events:

MatPAC Nanotechnology & Advanced Materials

Graduate Student

Talent Series

- April 28, 2011
- May 26, 2011
- June 30, 2011

PA Regional Nanotechnology Conference

- May 31, 2011

> Video Recording of Past Conferences:

Lehigh Surface Analysis Symposium

New Lehigh Faculty Introductions

- > Funding Opportunities
- > Chairman's Note

A WELCOME TO NEW LNN MEMBERS

The LNN community has expanded with the addition of 11 new members!

A big welcome to our new members:

- [BZ Plating Process Solution](#)
- [CRB Consulting Engineers, Inc.](#)
- [Da Vinci Science Center](#)
- [Duane Morris](#)
- [Enterprise System Partners Inc. \(ESPI\)](#)
- [Illuminex](#)
- [PChem Associates](#)
- [Reading Electric Renewables](#)
- [Science Smith](#)
- [The Collins Group](#)
- [Victaulic](#)

Featuring:
Metal Powder
Industries Federation



Metal Powder Industries Federation

This 65-year-old trade organization has been promoting the interests of their members who form the core of the powder metallurgy and particulate materials industry. The organization is comprised of the custom fabricating, powder producing, and equipment and service sectors of the market.

Networking, standards development and promulgation, education and awareness building, as well as industry technology exchange are all part of MPIF's mission. The annual PowderMet technical conferences and trade exhibit events feature the largest assemblage of PM technologists and industry suppliers in North America. The [MPIF website](#) is a central resource for industry information and access to equipment, services, and raw material suppliers.

UPCOMING EVENTS SPONSORED BY LNN:

Please see LNN website (www.lehigh.edu/lnn/events.shtml) for full list of events.

MatPAC Nanotechnology & Advanced Materials Graduate Student Talent Series

Date: April 28, May 26, and June 30, 2011

Time: 12-2 p.m. each day

Location: 4th Floor Whitaker Lab, Room 451

Lehigh University, 5 E. Packer Ave, Bethlehem, PA 18015

Cost: Free (Lunch included)

Sponsored by: Center for Advanced Materials & Nanotechnology, Lehigh University, LNN, and MatPAC universities

What are the Advantages of this Series?

- Overview of recent projects in Nanotechnology & Advanced Materials at MatPAC universities
- Opportunity to interact with graduate students
- Network with industry and university representatives
- Get a head start on recruiting key students for your business!

Graduate students will describe their accomplishments in the Advancement of Nanotechnology and Materials Science. This is a great networking event!

[CLICK HERE FOR APRIL 28 AGENDA](#) ... check out new analytical techniques like XuM!

PA Regional Nanotechnology Conferences: Nanotechnology for Industry

Date: May 31, 2011

Time: 9 a.m.-4:15 p.m.

Location: Drexel's Bossone Research Enterprise Center (see http://www.drexel.edu/em/directions/map_uc.html)

Sponsored by: Drexel University, Lehigh University, LNN, NTI, BFTP

Cost: \$35

The field of nanotechnology continues to be one of the leading forces behind our nation's ability to innovate and remain competitive in an increasingly global economy. Academia and industry must work together to develop, commercialize, and produce advancements that are enabled by nanotechnology. Drexel University, in collaboration with the Lehigh Nanotech Network (LNN) of Lehigh University, the Nanotechnology Institute (NTI), and Ben Franklin Technology Partners (BFTP) will bring together regional leaders to discuss the various capabilities, resources, partnerships, and entrepreneurial ideas among leading research institutions and businesses involved in nanotechnology. Poster exhibits and tours of Drexel University's Centralized Research Facility will also be offered. [CLICK HERE TO REGISTER](#) or contact Jill Buckley, Business Coordinator, A.J. Drexel Nanotechnology Institute, jmb368@drexel.edu or 215-895-6601.

[CLICK HERE TO PRINT FLIER AND AGENDA](#)

PA Initiative for Nanotechnology (PIN) PowerPoint presentation provides overview of DCED and BFTDA nanotech investments in PA

In Pennsylvania, micro- and nanotech are being advanced as enabling technologies that are bringing innovative projects to the next generation of development. Funding through the [Ben Franklin Technology Development Authority \(BFTDA\)](#) and other PA DCED programs since 1998 has grown the PIN initiatives to levels of national recognition for innovation and educational contribution.

PAST EVENTS & WEBINARS =>
VIDEO RECORDINGS/PRESENTATIONS

LEHIGH SURFACE ANALYSIS SYMPOSIUM

[CLICK HERE FOR RECORDED PRESENTATIONS FROM MARCH 23, 2011](#)



Lehigh University is now home to two unique surface analysis instruments that are the only such advanced surface characterization instruments in North America: ION-TOF Qtac 100 High Sensitivity-Low Energy Ion Scattering (HS-LEIS) and Scienta ESCA-300 High Resolution-X-ray Photoelectron Spectroscopy (HS-XPS) capable of 0.2-0.3 nm and 1-3 nm depth analysis, respectively. The symposium highlighted and discussed their advanced capabilities with lectures from Dr. Hidde Brongersma (inventor of the Qtac HS-LEIS), professors Israel Wachs and Himanshu Jain, Dr. Miller, and posters to demonstrate applications.

CENTER FOR ADVANCED MATERIALS & NANOTECHNOLOGY QUARTERLY MEETING:
NEW LEHIGH FACULTY INTRODUCTIONS

[CLICK HERE FOR RECORDED PRESENTATIONS FROM FEB. 14, 2011](#)

Molecular Dynamics Simulations of Reactive Capillary Flow

Dr. Edmund Webb III, Associate Professor, Mechanical Engineering and Mechanics

Appointed to Lehigh Faculty: 2010

Education:

Ph.D. Ceramic and Materials Science and Engineering, Rutgers University, 1996

B.S. Ceramic Engineering, Rutgers University, 1991

Related experience - teaching, industrial, etc.:

Sandia National Laboratories, Albuquerque, N.M., USA, 1998-2010

Exxon Research and Engineering, Clinton, N.J., USA, 1997-1998

Research activities, consulting, patents, etc.:

Research applies simulation techniques across multiple length and time scales to elucidate fundamental phenomena controlling the mechanical response of materials. Current studies include stress evolution in nanostructures and thin films, capillary-driven fluid flow in reactive flow systems, and mass and heat transport processes at interfaces between dissimilar materials.



Hierarchical Engineering of Tunable Nanoparticulate and Templated Porous Materials towards Reaction and Separations Applications

Dr. Mark Snyder, P.C. Rossin Assistant Professor, Chemical Engineering

Appointed to Lehigh Faculty: 2008

Education:

Ph.D., Chemical Engineering, University of Delaware, 2006

B.S., Chemical Engineering, Lehigh University, 2000

Related experience - teaching, industrial, etc.:

Postdoctoral Research Associate, Dept. of Chemical Engineering and Materials Science, Univ. of Minnesota, 2006-2008

Research activities, consulting, patents, etc.:

Design and synthesis of inorganic and functionalized nanomaterials: Controlled nanoparticle synthesis and functionalization; Assembly and templating of higher-order porous and functionalized structures and replica materials; Multiscale modeling of phenomena spanning molecular transport and dynamics to device performance; Novel materials and processes for applications in catalysis, high-resolution membrane-based separations and adsorption, and integrated reaction-separation technology.



LNN SECRETARY SUMMARY OF LNN WEBSITES

Please join the "LNN" Discussion Group on Google Groups:
Where you find general information on new university facilities available to local businesses and presentations from the LNN Regional Meeting "Enabling Solutions" & "Nanotech-Global Perspective 2010"
=>[Click here](#) for more details.

Also, please [click here](#) to update your member information (ie. changes in your contact information) when necessary, or to change the Focus Group to which your organization has been assigned.
Follow us on Twitter ([Click here](#))!
Please visit these sites today!



We are on the Web at
www.lehigh.edu/lnn

CHAIRMAN'S NOTE APRIL 2011

In January 2011, through the Ben Franklin Technology Development Authority, the PA Department of Community and Economic Development awarded Lehigh's Center for Advanced Materials and Nanotechnology a \$600,000 university research commercialization grant. This will be used to develop new technologies, expand research capabilities, commercialize innovative products, assist start-ups and other companies, and provide outreach and develop curriculum to ensure talented graduates for materials and nanotechnology careers. Some specific activities have been planned by CAMN to help achieve these objectives, and will be beneficial to many LNN members:

- Subsidized summer internships
- 2012 Nano for Business Conference
- LNN workshops and Focus Group meetings
- PA graduate student webinars and skills postings (on [MatPAC website](#))
- 10% annual growth in LNN membership

In addition, we continue to look for ways to leverage the resources of all members. If you have a need or a resource to offer (testing, analysis, knowledge sharing, technical services, special event, etc.), we can help you get the word to our 160+ members.

Finally, two reminders. First, we are seeking two new LNN Executive Board members prior to the next board meeting on June 9. If you are a Sustaining Member from industry and would like to participate, please contact us. Second, check the announcement on the PA Regional Nanotech Conference, to be held at Drexel on May 31. The LNN is co-sponsoring this event, which corresponds to our Nano for Business conferences held in the Lehigh Valley in even years. We hope to see many of you there.

Thank you for your interest and support,
Gene Lucadamo, LNN Academic Chairman



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