

KY NANONET

Connecting Kentucky's Micro/Nano Community

KYNN Overview

Editor: [Ana Sanchez Galiano](#)

The Kentucky nanoNET (KY nanoNET or simply KYNN) is a Kentucky NSF EPSCoR initiative for developing an "electronic parkway" within the Commonwealth for tying together all the various facilities, resources and people involved in micro/nanotechnology, advanced materials, and MEMS (micro-electro-mechanical systems). NSF projects the field of nanotechnology to explode from a \$400B industry today to a \$2.5T industry by 2020. To accommodate that tremendous level of growth, it is predicted that 2,000,000 nanotechnologists will need to be trained by 2020, a hundred fold increase in the number today (20,000). The NSF-supported KYNN initiative will help position the state of Kentucky to be an active participant in that economic opportunity. The KYNN presently consists of 14 distinct nodes and over 45 researchers and continues to grow each week. Please enjoy this newsletter and contact [Ana Sanchez Galiano](#) or [Dr. Kevin Walsh](#) to get involved with the KYNN.

Equipment Spotlight



In each newsletter, a signature tool from one of the KYNN nodes is highlighted. Today we present the Perkin Elmer Lambda 950 UV/VIS/NIR Spectrophotometer from The University of Louisville's Conn Center for Renewable Energy Research node.

Please contact [Ana Sanchez Galiano](#) to get your capability listed in a future newsletter edition.

Perkin Elmer Lambda 950 UV/VIS/NIR Spectrophotometer

The LAMBDA 950 is a high performance UV/Vis/NIR system, which uses a grid less PMT with Peltier controlled PbS detector to achieve high-performance testing across the spectral range from 175 nm to 3300 nm. The UV/Vis resolution reaches 0.05 nm, while the NIR resolution reaches up to 0.20 nm. Well suitable for applications such as highly reflective and anti-reflective coatings, color correction coatings, and more. Has several features and accessories designed for maximum versatility delivering optimal performance and value:

- Dual Sampling Compartments
- Integrating spheres to 150mm
- General Purpose Optical Bench (GPOB) handles a wide range of samples – including lenses and telescopes
- Wide range of sampling modules for use in photocatalysis

How to access:

For information about the equipment and access to the Conn Center, please contact Dr. Jacek Jasinski @ conn.center@louisville.edu or visit the Nova Center's website : <http://conncenter.org/>

Sign Up for Free Membership/ Add your profile to our researchers database, [click here](#)

List your Location as a Node, [click here](#)



KYNN News and Events

January - February 2012

Conferences, seminars, tutorials and other events hosted by KyNanonet Members are posted on kynanonet.org and sent to our Social Media friends ([Facebook](#) and [Twitter](#))

Online Equipment Database Now Active! List your Center's Equipment in the KYNN directory. Go to [equipment entry form](#)



Upcoming Events from KYNN members:

[KY nanoNET First Nodes Meeting](#)

Event Date: Feb 21, 2012

[COMSOL Multiphysics Workshop – Register Now!](#)

Event Date: Feb 29, 2012

[UofL MNTC Luncheon – Invited Speaker: Dr. Christine Trinkle. Department of Mechanical Engineering, UK](#)

Event Date: March 7, 2012

[KY 1st Nanotechnology Symposium – Register Now!](#)

Abstract Deadline: Feb 29 Event Date: March 30-31, 2012

[Nanodays 2012 @ Louisville Science Center](#)

Event Date: March 30 – April 1, 2012

For More Upcoming Events Visit Our [Event Calendar](#)

KYNN – Photomask Program

KORE (Kentucky Optical REsources) is KYNN's program for supplying high-quality photomasks and advanced lithographic processes such as e-beam lithography and greyscale lithography. KORE is available to both KYNN members and outside users. For more information, see details listed below or visit <http://kynanonet.org/kore1/>



KORE News: Curt McKenna, KORE Coordinator and Research Engineer at UofL MNTC, was an invited speaker at the Advanced Lithography Workshop held Dec 2011 at the Nanoscale Research Facility housed at the University of

Florida. The workshop focused on three areas of advanced patterning: Optical, Ebeam and Ion-Beam Lithography. Curt's talk was on using greyscale lithography to fabricate complex 3D micro-structures. The workshop attracted over 50 attendees including participants from UK, Princeton, FSU, Sandia and NRL.

KYNN – Shared Software Program

KRUNCH (Kentucky Research Users of Nano CAD Hub) is KYNN's shared software program which offers commercial micro/nano/MEMS CAD tools to its academic KY members at no cost. Presently four commercial software packages are offered (Tanner Tools, Coventorware, Intelisense, Silvaco). For more information, see details listed below or visit <http://kynanonet.org/krunch/>

KRUNCH News:

- Sign up for KRUNCH Software: Fill out the [Krunch Access Request form](#)
- COMSOL Multiphysics Workshop – [Register Now!](#)

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The KyNN is operated out of the University of Louisville Shumaker Research Building, home to the nationally-recognized Micro/NanoTechnology Center (MNTC). The MNTC encompasses core facilities for micro and nano fabrication, packaging, metrology & testing. The center includes a 10,000 sq. ft, 7-bay, class 100/1000 cleanroom, the largest in the state of Kentucky

KyNN Participating Nodes:



Sullivan University College of Pharmacy
<http://www.sullivan.edu/pharmacy>



UK Center for Applied Energy Research (CAER)
<http://www.caer.uky.edu>



Morehead RF Micro Characterization Lab
<http://www.moreheadstate.edu>



UK Mass Spectrometry Facility
<http://www.research.uky.edu/ukmsf>



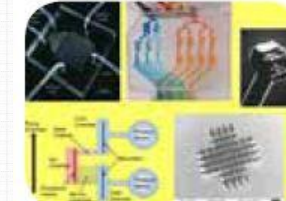
Murray State Microelectronics Lab
<http://www.murraystate.edu/qac/dcos/phy/facilities.html>



UofL Micro/Nano Technology Center (MNTC)
<http://www.louisville.edu/micronano>



UofL Rapid Prototyping Center (RPC)
<http://www.louisville.edu/speed/rpc/>



Bioengineering Initiatives UK and UofL
<http://louisville.edu/speed/engineeringplatforms/about-us>



UK Center for Advanced Materials (CAM)
<http://www.kvnsfepscor.org/cam>



UK Center for Nanoscale Science & Engineering (CENSE)
<http://www.engr.uky.edu/~cense>



UK Imaging Facility
<http://www.mc.uky.edu/SharedResource/electron>



WKU Nova Center
www.largechamber.com



Eastern Kentucky University
<http://www.chemistry.uky.edu/>



The ElectroOptics Institute and Nanotechnology Center (ERINC)
<http://www.ee.louisville.edu/~eri/>



UK Catalyst Research and Testing Center
<http://crtc.caer.uky.edu/index.html>



UofL Conn Center for Renewable Energy Research
<http://conncenter.org/>



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