



Issue Two

nanoHUB.org Establishes User Group

To better serve its more than 150,000 annual users, nanoHUB.org is establishing its first User Group.

The inaugural meeting will be Wednesday, December 8, 2010, in Arlington, Virginia, and is timed to coincide with the National Science Foundation's Nanoscale Science and Engineering Grantees Conference and the National Nanotechnology Initiative's Nanotechnology Innovation Summit.

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iTunes U Expands Reach of nanoHUB.org Content

Reflecting its mission to extend research and education beyond the walls of the classroom, nanoHUB.org has made its content available on iTunes U. The program, which is now entering its second year, was launched in November, 2009.



Apple's iTunes U was created in 2007 to distribute educational audio and video content for students, faculty, researchers, experimentalists, and lifelong learners. More than 600 universities and learning-focused non-profit organizations have contributed over 350,000 audio and video files to iTunes U. Most content is available at no charge.

nanoHUB.org was quick to realize how iTunes U could help engage the next generation of nanotechnology leaders, said George B. Adams III, deputy director of the Network for Computational Nanotechnology.

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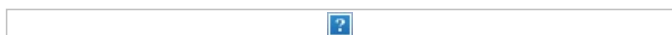
nanoHUB.org Simulation to Boost Photovoltaic Solar Cell Technology

nanoHUB.org's modeling and simulation expertise will be used to improve photovoltaic solar cells as part of a national effort to bring alternative energy technologies to the marketplace.

Funded by the Semiconductor Research Corporation, a university research consortium for semi-conductors and related technologies, the new Network for Photovoltaic Technology is based at the Birck Nanotechnology Center at Purdue University, West Lafayette, Indiana. The center is led by Ashraf Alam, Professor of Electrical and Computer Engineering, and Mark Lundstrom, the Don and Carol Scifres Distinguished Professor of Electrical and Computer Engineering.

The center addresses issues related to the performance, cost, reliability and manufacturing of photovoltaic cells. The Network for Computational Nanotechnology provides analytical models and simulation tools for photovoltaic manufacturing.

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Professors Alam and Lundstrom of the new Network for Photovoltaic Technology

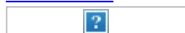
Interview

Carl-Mikael Zetterling is a professor and research area co-ordinator for Integrated Devices and Circuits at KTH, the Royal Institute of Technology at Kista, Sweden. Dr. Zetterling received his Ph.D. from KTH in 1997, where he also obtained an M.Sc.E.E. included among his research interests are process technology and device design for SiC devices, and dielectrics for SiC MOSFETS.

With an h-index of 17, Dr. Zetterling has 160 internationally published articles and contributions to his credit. Included among them are: editing one book about process technology for silicon carbide devices, co-writing one book on plagiarism prevention, eight invited talks, and five book chapters.

He resides in Stockholm.

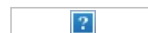
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Carl-Mikael Zetterling: Using nanoHUB to help students think big

nanoHUB Tool Highlight

Take Our Poll:



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Trends and Perspectives:

IBM researchers have published a new technique in the journal Science that measures how long a single atom can hold information; this gives scientists the ability to study and extremely fast phenomena in atoms at speeds one million times faster than previously thought possible. [Read More...](#)

Upcoming Events

Nov. 14-16: NNIN/C & NCN Workshop, Ithaca, NY — Join leading figures in simulation to develop *lingua franca* formats and libraries for easy translation of input and output files between codes. [Read More...](#)

Dec. 6-8: 2010 NSF Nanoscale Science and Engineering Grantees Conference, Arlington, VA — Highlights the research and education activities of ongoing NSE grant projects. [Read More...](#)

Dec. 8: First Annual nanoHUB.org User Forum, Arlington, VA — nanoHUB User Group members gather for first annual meeting. [Read More...](#)

Dec. 8-10: National Nanotechnology Innovation Summit, Washington, D.C. Sponsored by the National Nanotechnology Initiative. [Read More...](#)

In Brief

Washington Monthly magazine has ranked Chippewa Valley Technical College as the 10th best community college in the nation. [Read More...](#)

New on nanoHUB

Energy Innovations in the 21st Century: Role of ARPA-E In 2009 Dr. Arun Majumdar explains how Advanced Research Projects Agency-Energy (ARPA-E) came into being and what it is planning for the future. [Read More...](#)

PN Junction Lab was developed by Matteo Mannino, Dragica Vasileska, Michael McLennan, Xufeng Wang, Gerhard Klimeck, Saumitra Raj Mehrotra, and Benjamin P Haley to enable users to explore and teach the basic concepts of P-N junction devices. Users can edit doping concentrations, change materials, tweak minority carrier lifetimes, and modify ambient temperatures, and then see the effects in the energy band diagram, carrier densities, net charge distribution, (current-voltage) I-V characteristic, etc. Version 1.7.2 was published October 27, 2009.

Log on to [PN Junction Lab](#)

ABACUS: Test for MOSFET Tool Provides instructors or self-learning students with a classroom level test to help when students have gone through learning material, worked exercises, and have completed the assignments and the challenge problem. [Read More...](#)

Notable Quotes

"I believe that nanoHUB.org will always be a pathway into nanotechnology for every young researcher in this field." Munkhbaatar Nyam-Osor National University of Mongolia
— September 27, 2010

"nanoHUB allows me to interact with students and professors from around the world. There is no such thing as a dull moment when you're using nanoHUB." Jose Valdez Undergraduate, Electrical Engineering, University of Texas at El Paso
— September 16, 2010

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The Network for Computational Nanotechnology and nanoHUB.org, are supported by NSF.

