



Headline Stories

1. The i-AMT space in Benjamin Hall Building moving into the construction phase. We are happy to report that the UW Regents have approved the design i-AMT space in Benjamin Hall Building. The i-AMT space is designed to support interdisciplinary research conducted in the Institute's thrust areas and some of the Shared Instrumentation Facilities (SIF). Space for proprietary research is also provided for industrial partners. The construction will begin in Sept 2008, and move-in date is expected to be in May 2009.



Benjamin Hall Building.

2. i-AMT Shared Instrumentation Facilities (SIF). i-AMT affiliated faculty led by Hochberg and Ginger have been working hard to establish several state-of-the-art facilities for conducting cutting-edge research. Two of the four SIF's are coming online: The Shared Facility for Fabrication and Characterization of Organic Thin-Film Devices, located in Bagley 453 has come online with the completed installation of the tandem inert atmosphere system. Additional installation of all accessory equipment will be completed by September 2008. This \$1M facility was made possible by funding from the Murdock Charitable Trust and the DOD DURIP program.

The Shared Optoelectronic Device Testing Facility has already received the key instruments for this facility,

including a \$100K photoelectrical testing system. We are in the process of applying for further funding (~\$750k) from the Murdock Charitable Trust and other sources to equip this facility. It will be available to users when the installation of all major instruments in the Benjamin Hall Building is completed.

The High Throughput Electron Beam Lithography (EBL) Facility is also in the process of becoming a reality. The participating faculty members have secured the necessary funding (\$5M) from several private and state sources to make this facility possible (<http://uwnews.org/article.asp?articleID=43466>), and are in the process of finalizing the purchase an EBL system. This equipment will be located in the Washington Technology Center.



Tandem inert atmosphere system in The Shared Facility for Fabrication and Characterization of Organic Thin Films Thin-Films in Bagley 453.



State-of the-art photo-electrical testing system in the Optoelectronic Device Test Facility.



i-AMT sponsored Events:

- Nanophotonics for breakfast series: <http://depts.washington.edu/nanophot/>
- MSE Seminar Series: <http://depts.washington.edu/mse/about/news/seminars/seminar-win-2008.htm>
- Intensive Courses in Nanoscience and Nanotechnology at PNNL: <http://www.nano.washington.edu/pnnl/>
- Micro Nano Breakthrough Conference (Sept 8-10, 2008, Vancouver, WA)

Awards:

Rajendra Bordia,
Humbolt Research Award
<http://depts.washington.edu/mse/about/news/0804bordiar-Humboldt.html>

David Ginger,
ACS Unilever Award at Colloid and Surface Science Symposium
<http://www.colloids2008.org/sessions/index.html>

Christine Luscombe:
Young Faculty Award from DARPA
www.darpa.mil/body/news/2008/YFA_2008_Final.pdf



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3. Discoveries to practical commercial applications.

Members of the *i*-AMT Technology Advisory Board have met several times to develop strategies to expedite the transition of UW research to the commercial sector to create societal impact. This effort has resulted in several case studies focused on the work of Shaoyi Jiang (ChemE), Lih Lin (EE), and Alex Jen (MSE), designed to evaluate the potential of translating the discoveries made in their respective labs into commercial applications. To learn more about how the *i*-AMT Technology Advisory Board can help you, please contact Keith Rital (ritala@u.washington.edu).

4. Research Initiatives.

i-AMT is committed to support and engage in research initiatives that have the potential to have high impact for the UW. Recently *i*-AMT has actively engaged in the preparation of several major proposals covering research on energy, and bio-nanotechnology, as well as proposals for major equipment. Examples include 1. DOE Energy Frontier Research Center, \$25M (Jenekhe), 2. NIH training grant: Nanoscience and Nanotechnology for Cancer Research, \$2.5M (Zhang), and 3. ONR Solar Energy Initiative, \$540K (Jen).

i-AMT has also provided strong support for the following equipment proposals with approximately ~\$7M in potential funding: 1) MRI and WTC proposals for a High Throughput e-Beam Lithography (EBL) System, \$5M (Hochberg), 2) Murdock proposal on Integrated Photonic Characterization System, \$750K (Hochberg), 3) Murdock and DURIP grants for two inert atmosphere tandem dry box systems for thin film device fabrication and testing, \$1M (Ginger, Jen).

i-AMT's Energy and Photonic Research Thrusts have been working closely with the Photonics Steering Committee (headed by Alvin Kwiram) to develop a comprehensive plan for an Energy Initiative for the Pacific Northwest. It will involve the participants from universities, companies, PNNL, state government, and investors. Several of the key *i*-AMT faculty will present an overview of the initiative at the Chamber Leadership Conference.

5. Industrial Partnership.

i-AMT has reached a landmark agreement with Intel to pursue joint research on organic solar cells. An Intel scientist will be embedded in the *i*-AMT

labs and \$250K of equipment will be donated from Intel. In addition, *i*-AMT's IP Manager, Keith Ritala has worked closely with Boeing to initiate a new research initiative on improving energy efficiency of next generation aircrafts. This program provides \$500K to fund faculty researchers from both UW and WSU. Christine Luscombe, a faculty member of *i*-AMT, has partnered with Teijin Ltd (Japan) to produce air-stable, solution processible n-type polymers. *i*-AMT members will also actively engage in the upcoming Micro Nano Breakthrough Conference presenting research advances in organic electronics and energy materials.

6. *i*-AMT welcomes Dr. Marco Rolandi.

Dr. Marco Rolandi is officially joining the MSE faculty in the fall of 2008 as an Assistant Professor. Marco will bring his expertise in nano-scale fabrication of novel materials to UW. Marco received his Ph D in Applied Physics at Stanford Univ and was a postdoctoral fellow at LBNL and UC Berkeley prior to joining UW. He will conduct his research in one of the *i*-AMT research labs in Benjamin Hall Building.

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