

UW-Platteville Startup Wins Governor's Business Plan Contest

Graphene Solutions, a startup company formed by UW-Platteville Professor Jim Hamilton, has won the grand prize in the Governor's Business Plan Contest. Professor Hamilton and his student, Philip Streich, have worked with WiSys to patent the discoveries leading to the startup's creation. Hamilton and Streich have been featured in recent WiSys newsletters as Innovation Scholar Award recipients.

The Governor's Business Plan Contest (BPC) was conceived by Governor Jim Doyle and launched in 2004 to encourage and assist Wisconsin entrepreneurs. The Grand Prize is worth \$50,000 and finalists also receive cash prizes; since 2004, finalists selected from over 1,000 entries have won almost \$650,000. Beyond cash prizes, selected entries also receive mentoring and comments on their business plans. Contest press has also proved to be beneficial to past finalists, who have reportedly raised \$11 million from angel and venture capital, as well as other private equity.

Graphene Solutions was formed after a discovery by Hamilton and Streich. Previously thought impossible, they hit upon a way to dissolve bundles of carbon nanotubes. Unlike previous attempts in the nanotechnology field, their solution works reliably, permanently, and inexpensively.

The impact of this discovery is vast: 500 times stronger than steel and 1,000 times more conductive than copper, carbon nanotubes are the building blocks of nanotechnology. Applications for nanotubes include improved electronic displays for televisions and computers, composite materials, and solar panels. They expect to have a product in the market by 2009. Check wisys.org for a link to BusinessWeek's feature on Graphene Solutions.

Innovation Scholar Award Ceremony Held at Stevens Point

Professor Mike Zach, UW-Stevens Point, was presented with

WiSys's Innovation Scholar Award on November 11, 2008.

Zach was awarded for his method of utilizing patterned ultrananocrystalline diamond (UNCD) electrodes for depositing nanowires, which will advance electrochemical step edge decoration (ESED) into a technology with commercial

applications, including chemical sensing, optical signal processing, and nanoelectronic devices. After an introduction from UWSP Chancellor Linda Bunnell, Zach gave a short presentation about his research. WiSys Senior Associate Allyson Hauser presented the award, which is sponsored by Quarles & Brady.



Professor Mike Zach with students

IN THIS ISSUE

- 1 Platteville Startup Wins Award
- 1 Innovation Scholar Award
- 2 Events
- 2 UW System Corner
- 3 WEN Update
- 3 In the News
- 4 Discoveries and the People Making Them

EVENTS

RECENT EVENTS:

FIRST WISCONSIN SCIENCE & TECHNOLOGY SYMPOSIUM HELD AT UW-STOUT

July 17-18 – The first annual **Wisconsin Science & Technology Symposium**, held at UW-Stout, was a great success. Organized by WiSys, UW-Stout, UW System, UW-River Falls, UW-Stevens Point and Marshfield Clinic, the symposium joined together nearly 150 participants for presentations on innovative research from the UW comprehensive campuses and other research organizations in Wisconsin. In addition to showcasing the depth and breadth of research at UW schools, the symposium provided excellent networking opportunities and was highlighted by a speech from Governor Jim Doyle, in which he announced his new scientific advisor, James Dahlberg.

The WSTS schedule and some PowerPoint presentations from the event are available on our website. Please go to wisys.org/forresearchers and click on the Collaborative Events link.

ENGINEERED MATERIALS GATHERING

August 8 – A regional collaboration workshop was held at UW-River Falls. **The Engineered Materials Gathering**, organized by the River Falls and Whitewater campuses and WiSys, focused on research initiatives of composites for

bio-implantation, production of proteins, and cell and tissue engineering. Attendees included researchers from the UW System and the University of Minnesota, private industry representatives from BioE, Interfacial Solutions, and a few medical companies and consortiums. Several collaborative projects are in discussion as a result of the gathering.

UPCOMING EVENTS:

NANOTECHNOLOGY CENTER INAUGURATION AND SYMPOSIUM

December 6 – UW-Platteville is proud to announce the **inauguration of the Nanotechnology Center for Collaborative Research and Development**. The center is designed to foster innovation through collaboration, encourage high-tech business growth, train students for advanced jobs, and further the field of nanotechnology. Professor Jim Hamilton has been appointed director of the center. The inauguration by UW System Regents President Mark Bradley will take place at the UW-Platteville Student Union at 1:30pm.

In addition to the inauguration, a **Symposium on Advances in Nanotechnology Research at UW System** will also take place at UW-Platteville on **December 6**. The symposium starts at 10:30 in the Student Union. Space is limited, so register soon to guarantee a spot. Attendees will include researchers from the Midwest and UW System campuses, nanotechnology companies, and public and private dignitaries. Contact Mike Cenci at mcenci@wisys.org or 608.263.0871 for information or to register.

University of Wisconsin System CORNER

BY KRIS ANDREWS

- The American Association of State Colleges and Universities recently addressed the impact of public colleges and universities on statewide economic development. The policy brief concludes that a state's competitive advantage in the knowledge-driven economy increases when it uses all intellectual resources available within its universities, and when all public postsecondary institutions participate in research and development grant programs. There must also be legislative and public policy support to facilitate efforts to attract, retain and expand business and industry within the state. The UW System, through its work with WiSys Technology Foundation, exemplifies how all UW institutions are economic engines for spurring research and economic development activities across Wisconsin.

- Last month, UW System President P. Reilly and UW Regent President Mark J. Bradley made a trip to Washington, D.C., to meet with the Wisconsin delegation in Congress. While there, they delivered a letter signed by leaders across the UW System seeking full funding of the provisions authorized in the America COMPETES Act. This act calls for a doubling of the federal investment in research in the physical sciences and engineering at the National Science Foundation, the U.S. Department of Energy, and the National Institute of Standards and Technology within the U.S. Department of Commerce.

- Watch for further details about the NSF Regional Grants Conference hosted by UW-Milwaukee and the UW System on March 6, 2009.

Promoting growth through innovation.

IN THE NEWS

DEADLINE FOR PRE-PROPOSALS

For UW System researchers interested in applying for ARG and ARG-WiTAG funding, WiSys is now accepting pre-proposals online. The pre-proposal process allows us to assist with submissions for stronger full proposals. Pre-proposals must be received no later than Friday, November 14 for consideration. Check wisys.org for details.

HAMILTON NAMED DISTINGUISHED PROFESSOR

Jim Hamilton, UW-Platteville, has been named a Wisconsin Distinguished Professor. The Wisconsin Distinguished Professorship program acknowledges professors whose work in vital fields is exceptional and shows great promise for enhancing Wisconsin's economy.

OSHKOSH PROFESSOR FORMS STARTUP

UW-Oshkosh Professor Charles Gibson has formed a start-up company, Oshkosh Nanotechnology LLC, to develop and market cheaper and more energy efficient lighting. The unique phosphor that Dr. Gibson uses emits a spectrum of white light much closer to natural light than the fluorescent lights currently on the market.

FIRST WISYS BABY!

Mindy and Nate Dawson welcomed a daughter, Quinn Marie, on August 20. The WiSys team was very excited to greet the first WiSys baby!

UW SYSTEM RETIREES AND NEW HIRES

Ron Singer, Associate Vice President for Academic Affairs, and Melissa Kepner, Academic Planner, have both retired from the UW System after many years of service. Ron and Melissa worked closely with the WiSys team. We appreciate their efforts and wish them the best of luck in retirement! Stephen Kolison is the new Associate Vice President and Carmen Faymonville is the new Academic Planner. We look forward to working with the new System team!

QUESTIONS & COMMENTS

To submit articles, provide feedback, request edits, or obtain copies of current or past issues of the WiSys Newsletter, please contact Emily Brown at 608.890.2328 or ebrown@wisys.org. All suggestions are welcome.

HAUSER JOINS WISYS TEAM

Allyson Hauser joined WiSys in early September as a Senior Associate. Ally previously worked at EMD Chemicals, Novagen Brand, holding several positions over ten years, including Product Manager. She will work with Maliyakal and the WiSys team to support technology transfer activities through licensing and marketing and coordinating UW System and WiSys's research grant process. WiSys is happy to welcome Ally to the team!



Ally Hauser

WEN Update

Wisconsin Innovation Service Center supports inventors

By Ashwini Rao

Inventors recently had a one-stop opportunity to exhibit and test-market their product ideas as well as receive guidance on starting and growing a business.

The 2008 Ideas to Profits Conference, Oct. 1-2, 2008, in Appleton, was hosted by the Wisconsin Innovation Service Center (WISC), a specialty center of the Small Business Development Center (SBDC) and a Wisconsin Entrepreneurs' Network partner. WISC, located on the UW-Whitewater campus, specializes in new product and invention assessments and market expansion opportunities for innovative manufacturers, technology businesses and independent inventors nationwide.

At the conference inventors competed for up to \$5,000 of in-kind services from WISC. Eighteen submissions from Wisconsin and Illinois were featured in the juried inventors showcase.

For more information, check academics.uww.edu/business/innovate/workshops.htm, or contact the Wisconsin Innovation Service Center at 262.472.1365 and outreach1@uww.edu.

Discoveries and the People Making Them: John Droske

By Mike Cenci

Plastics, rubbers, and proteins all have something in common: they are made up of polymers. Polymers have been studied for several centuries, but few people can say they understand them better than John Droske, Professor of Chemistry at UW-Stevens Point. Professor Droske is now putting his knowledge to good use by conducting research into polymers that some day may be used in human health care. He is working with WiSys on this project to protect his intellectual property and transition his findings to proper medical uses.

Professor Droske has been studying polymers for a good portion of his life. He realized as an undergraduate how important this field of science is to all chemists. "Approximately 50% of all chemists will work with polymers at some time in their careers," said Droske. "Because polymer science touches on many areas, it is important for chemists to be trained in it."

NEW Product Development

WiSys is always looking for new products and projects, and we support collaboration across UW campuses and industry. Faculty are encouraged to contact us with ideas on new projects, product development, and partnerships. WiSys can provide funding assistance in some cases. Please contact Lisa Murray (lmurray@wisys.org, 608.263.2819).

Professor Droske is currently focusing his research on several different areas in polymer chemistry. One area is biomedical polymers for use as bioresorptive bone adhesives and tissue scaffolds. Another is minimizing the degradation of polymers in museum objects like space suits and decommissioned



John Droske

pieces of space exploration. Thermally stable polymer research for use in future space exploration missions is also of particular interest for Droske. He has worked in collaboration with NASA for many years, works closely with the Smithsonian National Air and Space Museum, and also promotes the teaching of and interest in polymer chemistry through courses at the undergraduate level. He welcomes collaborations from other UW comprehensives campuses in polymer-related areas.

One of the most impressive aspects about Professor Droske, beyond his knowledge of polymers, is his never-ending dedication to getting his students excited about macromolecular chemistry, while also making sure he is always available to help. In addition to the large number of students and research assistants he guides, he is the director of the POLYED National Information Center for Polymer Education. POLYED promotes polymer education by working with teachers of kindergarten up to the undergraduate level.

Droske, who received his bachelor's and master's at DePaul University in Chicago and his PhD at Colorado State University, also enjoys spending time with his family, fly fishing, and listening to, playing, and recording music.

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