Using Nanotechnology to Create Metal Foams

In the future, if you get a medical implant or a new radiator in your car, you may have Millersville’s Dr. Mark Atwater, applied engineering, safety & technology, to thank for making the parts within those things stronger and lighter. Atwater has been researching the use of nanotechnology on metal foams.

An article on Atwater’s research is currently online and will soon be published in “Advanced Engineering Materials.” Atwater and his fellow researchers, Kris A. Darling and Mark A. Tschopp, wrote the article. “Metallic foams and porous metal structures are valuable because they are strong, can absorb impact energy and allow for efficient heat transfer,” said Atwater. “There are many techniques for generating metal foams, but they are mainly created through liquid state processing.”

Atwater’s research shows how the “AERO” process, which is a solid state process, can create metal foams by mechanically mixing in oxide particles. AERO stands for Additive, Expansion, by the Reduction of Oxides. The process can create foamed particles or bulk parts.

You can watch a clip of the serial sectioning of a single, foamed copper particle at: http://onlinelibrary.wiley.com/store/10.1002/adem.201300431/asset/supinfo/adem201300431-sm-0001-SuppFig-S1.gif?v=1&s=2410042c646030030c12bb1c065d433cecdad07d.

“Our research investigates how one can make foams from difficult metals,” said Atwater, who discussed the concepts of his research in the classroom. “Most metal foams are aluminum because it is easy to melt, but our research shows how copper can foam at low temperature as well. We hope to extend this process to other important metals such as titanium in the near future.”

Atwater and his collaborators are currently working to obtain a patent on their new process.

And, if you’re looking for a job, Atwater says the government is putting a lot of money behind nanotechnology, which is being increasingly incorporated into products.
Millersville University Theatre Presents “A Lesson Before Dying”

The Millersville University Theatre will present the play “A Lesson Before Dying” for their first performance of the 2014 spring semester.

The play, based on the novel by Ernest J. Gaines, tells a story about Jefferson, an innocent young black man who is condemned to death in rural Louisiana in 1948. At the trial, his lawyer compares executing Jefferson with killing a hog. As a result, Jefferson acts like a hog in prison, insisting that he will be dragged to his death in the electric chair. His godmother asks the local schoolteacher to teach Jefferson to die like a man. The teacher, Grant Wiggins, who is struggling to quit his poor parish school and leave the South, confronts both Jefferson and himself as the execution day arrives, forging a bond between the two men as they come to understand what it means to decide one’s own fate.

Dr. Amanda Kemp, founder of Theatre for Transformation, will be guest directing the play. “I was hesitant to originally take on this play because I thought it would be too sad. I was afraid it wouldn’t be inspiring,” said Kemp. “However, after I read the play and saw how the main character chooses to die, and how it affects the individuals around him, the play inspired me.”

Tony Elliot, associate professor of communication & theatre, also was moved by the play. “I read the novel more than 10 years ago, and I loved it,” said Elliot. “It was very moving and full of information of the time and place in 1948—Deep South and racial tensions. It was mostly about the people trapped in the situation and what they did to deal with it.”

Opening night is Friday, February 28 at 8 p.m. at the Rafters Theatre in Dutcher Hall. Additionally, on March 6 after the performance, a talkback will be held with the cast, directors and audience members to discuss the play and any issues suggested by the play. A full list of performance dates is listed below. Tickets cost $10 for general admission and $7 for students.

**Additional Performance Dates:**
- Saturday, March 1 at 8 p.m.
- Sunday, March 2 at 2 p.m.
- Thursday, March 6 at 8 p.m.
- Friday, March 7 at 8 p.m.
- Saturday, March 8 at 8 p.m.
- Sunday, March 9 at 2 p.m.
The Most Quoted Man on Campus

He is The Most Quoted Man in the World. Well, maybe not the world, but the most quoted person in Lancaster and throughout much of Central Pennsylvania. He is Millersville’s Eric Horst. Horst, director of the weather information center and meteorologist at Millersville, spends most of his time forecasting the weather and mentoring students in the art of forecasting, as well as being regularly quoted in local newspapers, radio, and TV.

Not only is he the "go-to" person when Millersville University is deciding whether or not to close, but he also has national recognition, recently appearing on National Public Radio (NPR) and being interviewed for Associated Press articles throughout the nation.

It's been a busy winter for Horst. He is quoted on an almost daily basis in local newspapers, such as the Intelligencer Journal/New Era, Sunday News and the York Daily Record. It's his information that provides the basis for front page articles such as “Another Storm Headed Our Way” and “Rumors Fly in Advance of Flakes.”

“I would like to personally thank Eric for all of his help during the many storms this winter,” said Dr. Richard Clark, chair of earth sciences at Millersville. “I often remind people that you are doing many of the interviews on your own time, not only for Lancaster newspapers, but for many other media in Central Pennsylvania. It is a wonderful service you offer.”

Horst has been featured in several video chats with LancasterOnline this winter. He provides an in-depth analysis of coming storms and what people need to know to be safe.

Horst has been an adjunct faculty and staff member at Millersville University since 1988. He founded Campus Weather Service and Millersville's Weather Information Center.

First Cabinet Fellow: Dr. Richard Clark
To provide department chairs who may have an interest in advancing their career the opportunity to observe and participate in the discussions of the Millersville University president’s cabinet, the University established the position of “Cabinet Fellow.” President John Anderson recently appointed Dr. Richard Clark, chair of the earth sciences department, to serve as the first fellow.

The president and his cabinet decided to establish this position as a professional development opportunity for department chairs. “We are instituting this unique opportunity as an avenue to increase our internal candidate pool for potential administrative vacancies in the future,” explained Dr. Vilas Prabhu, provost and vice president of academic affairs. “The cabinet fellow will experience firsthand the workings of a university president’s cabinet as they manage a modern American public university.”

The cabinet fellow is a full member of the president’s cabinet. As such, they are expected to attend and participate in all cabinet meetings. The appointment of a cabinet fellow is made at the sole discretion of the president for a one or two-semester term. The fellow’s duties and responsibilities will be performed outside the scope of the department chair’s normal duties. Any interested academic department chair is eligible.

“I am pleased to have Rich serve as our first fellow,” said Anderson. “Rich brings with him a wealth of knowledge as a long-time University employee, and his perspective as a faculty member will undoubtedly enrich our cabinet discussions. I look forward to working with him in this capacity.”

Millersville Student Zeager to Participate in The Harrisburg Internship Semester

Since its creation in 1989, The Harrisburg Internship Semester (THIS) has provided more than 500 students from the 14 Pennsylvania State System of Higher Education universities with semester-long internships from a wide variety of academic majors. This semester, Millersville’s own Briana Zeager, a senior majoring in government and political affairs with a minor in English, is one of 14 students from across Pennsylvania participating in the program.

Zeager is an intern working for the state Board of Probation and Parole (PBPP). She and the other participants will attend a variety of seminars that, in addition to the hands-on experience they receive, will culminate in an end of the year research project.

Her internship at the PBPP allows Zeager to gain experiences including visiting state prisons, participating in “ride-alongs” with parole agents and communication with government officials and agencies regarding the status of offenders on parole.
I’m grateful for the real world experience the internship provides,” said Zeager, who will be attending law school this fall.

Zeager aspires to eventually become a state or federal judge after focusing her studies on advocacy for victims of domestic violence.

While the internship program provides students with some real world experience in one of a variety of fields, THIS has proved itself to be mutually beneficial. Each semester policymakers in the various fields reap the benefits of a new point of view that each intern brings to the table.

For more information or to apply for THIS next semester, contact your local campus coordinator or visit http://www.passhe.edu/inside/asa/Opportunities/this/Pages/default.aspx.

Millersville Students Get “Pitch Perfect” with Foreigner

Millersville students “want to know what love is,” and Foreigner is going to show them on Feb. 21 at the American Music Theatre in Lancaster. Foreigner and Bose Audio have teamed up to sponsor the Grammy Foundation, which supports music in public education as one of its goals. It is kicking off the campaign by working with students in Millersville’s Music Business Technology (MBT) program. Students in the MBT program will be given the opportunity to participate in the background vocals for the Foreigner’s chart topping song, “I Want to Know What Love is.”

After finding out that the band had a program to support the Grammy Foundation, Dr. Barry Atticks, director of music business technology, contacted Foreigner’s manager Phil Carson and coordinator John Lappen about getting students involved.

Millersville students will also sell CDs for the band with all proceeds going to the Grammy Foundation to support its music education mission. The MBT students will get to interact with the band earlier in the day, as Foreigner’s rhythm guitarist/saxophonist Thom Gimbel will be hosting a clinic for the students on performing and touring.

“I wanted to provide an opportunity for my students to talk face-to-face with the band and be able to learn about the life of being a touring musician, so I talked to Phil [Carson] about making this clinic happen, and he did,” said Atticks.
In another special opportunity, the Millersville Chorale was asked by Carson to be the first university group to open for Foreigner that night. The 24-voice choral group will be performing a cappella arrangements of classic rock songs.

The Millersville students participating include Brynn Atticks, Danielle Bertucci, Reed Cormier, Colin DiLucido, Colin Durborow, Justine Franzi, Jeff Grey, Chris Grogan, Luke Helker, Brian Holmes, Greg Kneiss, Katlyn Lehr, Jeff McKinnon, Joe Migliore, Nick Mitchell, Andrew Pappasergi, Logan Ressler, Natalie Savage, Andrew Schwartz, Ian Solomon and Marcus Tavani.

**Block Party (A Robotics Competition)**

For the second time, the First Technology Challenge (FTC) Championship will be held at Millersville University – with nearly 400 high school students set to visit campus to participate in this robotics challenge. Hosted by the Millersville University Department of Applied Engineering, Safety & Technology (AEST), this event will be held on Saturday, March 1 in Marauder Court of the Student Memorial Center.

The competition will require teams of students to build and design robots following strict guidelines and size requirements. The teams will compete in the Block Party, a challenge requiring the teams to work together or against each other in various rounds featuring a sophisticated field with 100 blocks, scoring areas and pendulums. The team whose robot can gather the most blocks – with certain areas of a field worth more points than others – wins.

FTC’s goal is to encourage education and career opportunities in science, technology, engineering and mathematics.

“AEST invests a lot of time in bringing this program to Millersville,” said Dr. Sharon Brusic, associate professor, AEST. “With that, MU’s AEST will host an Open House from 10 a.m. to 1 p.m. in Osburn Hall, which will feature demonstrations and presentations, as well as admission and degree program information.” For specific Open House information, go to [http://www.millersville.edu/aest/Visit/open-house.pdf](http://www.millersville.edu/aest/Visit/open-house.pdf)
As another way to share information with high schools students participating in the FTC, MU’s AEST will set up a booth in Marauder Court with information on all the AEST majors offered at Millersville.

The FTC is organized entirely by volunteers. “As a sponsor of this competition, many MU AEST students and faculty members will be present to serve as volunteers,” added Brusic.

For more information on this year’s challenge, visit www.ftcpenn.org/ftc-events/2013-2014-season/pennsylvania-ftc-championship-tournament. To learn more about the FTC program, visit www.ftcpenn.org.

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**Odyssey of the Mind Returns to Millersville University**

For more than 25 years, the Odyssey of the Mind competition has taught kids to identify a challenge and learn creative methods to solve the problem. On March 15, Millersville University will host 566 kids from all across Central Pennsylvania in the annual competition.

“Odyssey is beneficial for kids because it teaches them how to work as a team, a skill critical in modern work environments, and it encourages kids to think creatively, outside of known solutions and existing ideas,” said Dr. Jill Craven, professor of film studies at Millersville and chair of the competition.

Odyssey of the Mind will empower the 88 teams of students from more than 52 schools to produce solutions for long-term and spontaneous problems. There are four divisions in the competition, which are categorized by grade level: Division I (Grades K-5), Division II (Grades 6-8), Division III (Grades 9-12) and Division IV (Collegiate). Teams select one of five long-term problems to solve which can take weeks. These problems can be technical, artistic or performance based. At the competition, the teams must also solve a spontaneous problem.

“Odyssey of the Mind emphasizes what creative communities can do, a concept which becomes especially important when grade schools are more geared toward testing the ability to remember what is already known, rather than developing innovative and imaginative thinking in our next generations,” said Craven.

This year’s competition will begin at 8 a.m. in the Student Memorial Center and continue past 4 p.m., with the awards ceremony in the early evening.
Art Auction Benefits Breast Cancer Programs

Dr. Dennis Denenberg, professor emeritus of education, is participating in an auction in which some of the proceeds will be donated to Millersville University’s Breast Cancer Awareness Programs.

The art deco objects in lots 1 through 107 have been donated by Denenberg. All money raised by the sale of those items (about 400 objects) will benefit the Millersville University Breast Cancer Awareness Programs. All other objects in the auction do not benefit Millersville.

Millersville’s Breast Cancer Awareness Program began with an endowment made by Denenberg to honor his late sister Diana Denenberg Durand ’67, who courageously battled breast cancer for 18 years.

Part of Millersville’s program includes the Diana and Marsha Breast Cancer Awareness Center in the Health Services Building. It is named after Denenberg’s sister and a good friend of his, Marsha Frerichs, the late wife of Dr. Richard Frerichs.

“I know personally that breast cancer is a frightening diagnosis. But neither my sister nor my good friend [Marsha Frerichs] let the disease define them,” said Denenberg. “Instead, they inspired others to appreciate the gift each new day brings.”

The actual in-person Discovery Auction will be held at The Gathering Place, 6 Pine Street, Mount Joy, on Saturday, Feb. 22, starting at 9 a.m. Doors will open to preview items on the auction day at 7 a.m.

To place a bid online, visit http://www.liveauctioneers.com/catalog_gallery/50685. For more information regarding the Discovery Auction visit http://www.witmanauctioneers.com/ and select Feb. 22 Discovery Auction.

Hazard Mitigation Work – Public Meeting Scheduled
Millersville University, with support from the Pennsylvania State System of Higher Education (PASSHE), has begun the process of updating the University’s Hazard Mitigation Plan. The plan will be the blueprint to provide options to ensure public safety and reduce property damage from the effects of future natural and human-caused disasters at Millersville University.

A steering committee has been formed and has been meeting this semester.

“Millersville is required by the Federal Emergency Management Agency (FEMA) and Pennsylvania Emergency Management Agency (PEMA) to have a plan so that we can apply for and receive matching federal and/or state aid dollars in the event of a disaster impacting our area,” explained Pat Weidinger, chair of the Hazard Mitigation Plan Committee and director of safety and environmental health at Millersville.

The campus and surrounding community are invited to a public discussion on potential hazards that should be included in the plan on Monday, Feb. 24, from 6 – 8 p.m. in Room 18 of the Student Memorial Center.

A website has been created to post meetings and other pertinent information at:


**Need to Know**

You are cordially invited to the fourth annual

**“Power of the Purse”**

A scholarship benefit for the Women’s Giving Circle at Millersville University

Thursday, March 27, 2014
4:30-7 p.m.

4:30-5:30 p.m. - Reception and Silent Auction of Newly Donated Purses
5:30-6:15 p.m. - Remarks and Scholarship Presentation
Susan Connolly Eckert
Principal, the Eckert Group
6:15-7 p.m. - Silent Auction Conclusion and Networking
The Grand Salon and Atrium, Third Floor
The Ware Center
Millersville University Lancaster
42 North Prince St.

Please respond with your attendance plans by March 17, 2014. We invite you to donate a gently loved purse to benefit Milagro House, a venue that provides education, housing and counseling for women and their children experiencing homelessness. You are welcome to bring them with you that evening.

Contact Information - The Office of Special Events: 717-871-5926
Special.events@millersville.edu ~ www.millersville.edu/specialevents

Need to Know
Free help to apply for health insurance program

Confused by the new health insurance options? You are not alone.

On Saturday, March 1, you can get free help from Millersville University students and other community volunteers. The event will be held from 10 a.m. to 3 p.m. at the University’s Ware Center, located at 42 North Prince St. in downtown Lancaster.

Trained volunteers will provide one-on-one assistance to explain your options, help in applying for health insurance and setting up a web or email account for your use.

The free workshop is open to the public. Appointments are preferred, but walk-ins will be accepted. To schedule an appointment, call 717-392-1595.

To apply for the government’s new health insurance program on March 1, attendees should bring the following information and/or documentation:

- Social Security number and date of birth for everyone in your household
- Federal Income Tax Forms including W-2 and/or 1099 forms OR an estimation of your household income from all sources.
- If you or a household member has any current insurance coverage, bring the name of the insurance company and the policy number.
- If applicable, bring your immigration paperwork.
The outreach effort is a public service effort sponsored by Millersville University, Lancaster City County Medical Society, Project Access Lancaster County (PALCO), a program of the Lancaster County Medical Foundation, and Southeast Lancaster Health Services.

Need to Know
Employee Wellness and the SMC Fitness Center are offering

Yoga

Beginning February 25, 2014

Tuesdays 12:15 - 12:45 p.m.
Wednesdays 5- 5:45 p.m.

$4 per class for non fitness center members

Need to Know
Here are the faculty and staff activities for February 20, 2014.

**Faculty and Staff Activities**

Millersville University welcomes new employees (left to right) Amanda Flurry – budget analyst; Christopher Deans – assistant director in admissions; Kim Guasco – secretary in communication & theater; Jason Thompson – studio technician and Giselle Fernandez – scholarship & veterans’ coordinator.

**Dr. Jeffrey Wimer**, wellness and sport sciences, published a peer-reviewed article on health literacy, which is the ability to understand healthcare information to make appropriate medical decisions. It was published in the January 2014 edition of “International Journal of Athletic Therapy and Training” with co-authors from the College of St. Scholastica, Minn.

**Drs. John Wright and Mark Atwater**, applied engineering, safety and technology (AEST), co-authored and published their blinded, peer-reviewed white paper in January called “A Meta-analysis of the Skills Gap Dilemma in Today’s Engineering Professions” for the Association of Technology, Management & Applied Engineering (ATMAE). Their paper was also selected as
the 2013 ATMAE White Paper of the Year. Former AEST faculty member, Dr. Hosein Atharifar, also participated as a co-author of the article.

**Obituary**
Clayton N. Thomas, 96, formerly of New Danville, died January 29. He worked as a custodian at Millersville University for 19 years.

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**Who Makes Millersville Special**

This edition of Who Makes Millersville Special features Lucie Lehr, coordinator of data integrity in the development & foundation relations department.

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**Q: How long have you been at Millersville?**
A: I have been employed at Millersville since 2001.

**Q: Why did you come to Millersville?**
A: I grew up in Millersville and returned after serving in the Air Force and living on many bases during active duty and as an Air Force spouse. I already had ties to MU, so I looked into employment here.

**Q: Tell us why you decided on a career in data management.**
A: It wasn’t planned! I fell into this job when my predecessor retired because I had worked closely with the alumni database in my previous position. I discovered I love working with database technology and information gathering. It’s a great position. I feel I really found my niche.

**Q: Explain some of the things involved in your job. What is a typical day like?**
A: My typical day consists of seeking alumni updates online (including the Exchange!), running requested data extracts, handling impromptu research requests, troubleshooting data problems and working with my student employees to ensure timely and accurate data entry.

Q: What is the best part of your job?
A: Hands down: helping to raise money for educational scholarships. They are gifts that keep on giving.

Q: You are known as a wine aficionado. Tell us how that came about.
A: It happens when you do a lot of gourmet cooking. Food and wine complement each other well. Plus, I was lucky to have lived in both California and South and Central Europe, so I had access to some of the world’s best wines.

Q: What is your favorite wine?
A: Any wine that is exquisite AND inexpensive. I haven’t found it yet.

Q: Are you involved in your local community?
A: I am a member of the Millersville Lioness Club, serve on the Millersville Historical Commission and recently joined the Lancaster Sertoma Club. See me for Sertoma Chicken BBQ tickets!

Q: What do you do in your free time? Any hobbies? Sports?
A: I spend a LOT of time in the kitchen. And (don’t laugh) I have a vast collection of ethnic music CDs to match the meals. I also enjoy anything creative or educational, from painting to politics to international travel. You will often find me glued to the History and Science channels.

Q: Do you have any pets?
A: I have a wonderful 18-year-old cat named Puss. She is my “second-born.” I like dogs too, but I feel cats are more like their wild counterparts, and therefore bring us closer to nature.

Q: What was the last book you read?
A: I am reading “The Letters of Ernest Hemingway,” a Christmas gift from my husband in preparation for a trip to Key West.

Q: What is your favorite food?
A: Anything with fresh garlic and herbs, especially Mediterranean food. Fresh is key.

Q: What’s your favorite place to vacation?
A: The Greek Islands, not only for the beauty and incredible relaxation, but it is like going back in time.

Q: You were recently married. Did you go on a honeymoon?

A: We honeymooned at an eco-resort on the Riviera Maya. It had Mayan ruins, cenotes and a jungle right on the property.