

ENGINEERING News

Kazuo Inamori School of Engineering
Alfred University

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McMahon Engineering gets \$3.4M facelift

Phase I renovation completed September 2009

Phase I of major capital improvements to the McMahon Engineering Building are now completed. The \$3.4M Phase I project, funded by the State University of New York, targeted area was the north wing's second floor. Improved lighting, increased ventilation and better safety are obvious to students and staff. Less obvious were the extensive asbestos abatement required and the improved building services.

McMahon Building was slated for a major overhaul in 2001, with planning well underway when the World Trade Center disaster on September 11 derailed all NYS-funded construction projects. Planning for the current Phase I (just completed) was begun in 2005 under then-Dean Alastair Cormack.

Phase I began with the relocation of labs and offices in late 2007, with major construction beginning in January 2008. Work was finished just before classes resumed for the current term in August 2009. Some of the research activities and faculty offices that had been relocated to alternate locations in McMahon will be remaining in their current locations, at least temporarily, while the new spaces



continued on page 5

Dr. Harry Tuller is 2009 McMahon Award Lecturer

Thursday, October 22, 2009
Holmes Auditorium, Harder Hall
11:20 am

Dr. Harry L. Tuller, professor of ceramics and electronic materials in the Department of Materials Science and Engineering and Head of the Crystal Physics and Electroceramics Laboratory at the Massachusetts Institute of Technology, will present the distinguished McMahon Award Lecture for 2009 on October 22, 2009 in Harder Hall Auditorium. His lecture is "Electroceramics: Technology for the Future" (click for abstract).

The John F. McMahon Lecture was created in 1980 by Alfred University alumni to honor McMahon for his contributions to ceramic science and engineering. Each year, a distinguished ceramic scientist or engineer is honored with the McMahon Award and delivers the award lecture on campus.



Dr. Harry Tuller

continued on page 5

Engineering and Materials Science Day is November 12!

The Annual Engineering and Materials Science Day is slated for Thursday, November 12, 2009. Schools are invited to bring a maximum of ten junior and/or senior students to AU to participate in a scholarship opportunity.

Inamori School of Engineering Scholarships will be awarded based on the results of a scholarship exam. First, Second and Third placed students will each receive a 4-year scholarship that can be applied toward tuition in any of our engineering programs at Alfred

continued on page 5

 Inamori School of
Engineering
See us at Booth
209!
Exhibition hours
-Tuesday, 10/27
11am-6pm
-Wednesday, 10/28
10am-4pm.
SOE Reception -
Tuesday evening,
on the Allegheny
Overlook!
October 25-29,
David L. Lawrence
Convention Center
Pittsburgh, PA
Program ... page 4

Report from the real world - Thomas Rein at Acumentrics



Student Thomas Rein (senior, CE) worked his recent Co-op at Acumentrics Corp., a leading developer of innovative power generation and conditioning solutions, located in Massachusetts.

On his Co-op, Rein was involved with many aspects of the fuel cell fabrication process. Initially work was focused

upon material qualification from the incoming raw powders to the anode substrate tube. Work then progressed to a project based environment where Rein was asked to investigate a number of issues relating to cell performance and cost. In particular, Rein investigated methodologies to allow a reduction of the electrolyte layer thickness by greater than 60% while still maintaining a viable gas tight cell.

The result of this work was the successful fabrication and electrochemical testing of a number of cells with the reduced electrolyte thickness. If implemented into production, this work has the potential to lead to higher performing lower cost cells.

Acumentrics has developed solid oxide fuel cell (SOFC) power generators that can also provide space heating and cooling. In addition, Acumentrics is also a supplier of rugged uninterruptible power supplies for mission critical applications.

Acumentrics has developed a unique, fuel flexible, tubular solid oxide fuel cell power system. While many fuel cells require hydrogen to run, Acumentric's fuel cells can run directly from commonly available fuels, such as natural gas, propane and biofuels. Acumentrics has already field tested a large number of SOFC generators around the world running on hydrogen, methane, propane and biogas with great success.

Materials Advantage kicks off new year

Materials Advantage (the student professional organization for materials science and engineering) kicked off their 2009-2010 event-filled year with the annual Engineering barbeque on September 18th. Good weather and good food contributed to an enjoyable evening for all!

Materials Advantage have announced their officers for this year: Patrick DiCesare, president;

Krista Kalac, vice-president; Marissa Tousley, secretary; and Griffin Patterson, treasurer. DiCesare and Kalac will represent Alfred University in the student leadership workshop at the upcoming MS&T'09 in Pittsburgh, PA, where the chapter will also compete in the mug drop competition and in the student speaking contest.



Student volunteers enrich AUGust Friday campus recruitment visits

Alfred University's Admissions team brought prospective students and their families to campus for "AUGust Fridays" for tours and information. A popular feature of these days were the lab demonstrations and tours conducted by faculty and student volunteers.

In materials science, ceramic engineering and glass programs, demonstrations were conducted

by PhD students Eric Nichols (CE), Brenden Hill (MSE), Katie Goetschius (Glass), and Laura Adkins (MSE) and MS (MSE) students Brittany Higgins and Kara Vaneck. Lab tours were conducted by seniors Rob Koch (CE), Krista Kalac (MSE), and Greg Badger (GES), and PhD student Jake Amoroso (MSE).

Prospective students also visited the EE lab and the STEP lab. Dr. Jianxin Tang, professor of electrical

engineering; Dr. Xingwu Wang, professor of electrical engineering and Dr. Joe Rosiczkowski, associate professor of mechanical engineering, welcomed prospective engineers and conducted demonstrations and tours of these areas.

BAJA! Saxon Racing June 2009

The AU Mechanical Engineering's Saxon Racing Team traveled to compete in the SAE Baja Competition (part of the SAE Collegiate Design Series) in Burlington, WI. The team entry was the culmination of over 300 combined hours of design and manufacturing work. 14 students, 1 Gravity-Racer alumnus and their faculty advisor camped out at nearby Elkhorn for the June 2009 4-day event.

Nearly 120 entries attempted the grueling course; entries were evaluated for endurance, pull, maneuverability, acceleration technology, design and cost. Courses were always challenging and varied from just dirt to grueling mud. The 2009 overall winner was from Oregon State University.



Knox, PCSA, move to increase student participation in Orlando

PhD student Victoria Knox (Ceramics) is the council chair for the American Ceramic Society's President's Council of Student Advisors (PCSA). The PCSA is a student-led group which reports directly to the ACerS board of directors and whose mission



is to engage students as active and long-term leaders in the ceramics community and to increase continued participation in ACerS at the local, national, and international levels.

The PCSA will host "The Future of Electronic Ceramics: A New Investigator Symposium" which will focus on undergraduate and graduate research in electronic ceramics at the upcoming Electronic Materials and

Applications Conference in Orlando, FL in January 20-22, 2010. (The deadline for abstracts was July 27th, 2009).

Knox is the principal organizer of the symposium; organizers also include Laura Burka (Graduate Student, Clemson University), Programming Chair for the PCSA; Dr. Jacob L. Jones, University of Florida; and Dr. Geoff Brennecke, Sandia National Laboratory.

Alumni news and honors



Alum Rob Lattimer (CE'83) elected to AU Sports Hall of Fame

Robinson Lattimer CE'83, was recently elected to the Alfred University Sports Hall of Fame. An All-American swimmer at AU, he earned honors in the 1,650-yard freestyle, the 200-yard butterfly and the 500-yard freestyle. Lattimer also swam on the 1983 team that went undefeated.

Lattimer is the global business leader for ceramics for Kennametal Inc., a Latrobe, PA-based company that manufactures and sells tooling engineered components, and advanced materials used in production processes. He oversees a \$40 million business unit that produces a variety of ceramic materials.

Lattimer and his wife, Annbeth, live in Wilton, CT, with their two children, Timothy and Megan.

Michelene Hall (PhD'08) founds Excelerant Ceramics

In March 2009, Dr. Michelene (Miller) Hall founded Excelerant Ceramics. The new business is located in the Ceramics Corridor Innovation Center in Alfred, NY. The technological focus of Excelerant Ceramics is the development of materials for hydrogen production.

Excelerant Ceramics will also be offering independent testing of catalyst materials, and expertise in hydrogen interactions with glasses and ceramics. Hall continues to maintain a close working relationship with her former advisor, Dr. Scott Misture, Inamori Professor, and other colleagues in the Inamori School of Engineering.

Inamori School of Engineering Research Presentations at MS&T 2009

Research presentations and posters from the Inamori School of Engineering at MS&T'09 include a wide range of topics in advanced materials. The list below is organized day-by-day.



Of special note - Dr. Doreen Edwards, Dean of Inamori School of Engineering, is among the organizers of two important symposia:

"International Symposium on Defects, Transport and Related Phenomena: Defects and Transport in Materials Related to Fuel Cells" (with co-organizers Sangtae Kim, UC Davis; Ruediger Dieckmann, Cornell U; Manfred Martin, RWTH Aachen U; and Thomas Mason, Northwestern U) and

Phase Equilibria Symposium in Memory of Dr. Richard M. Spriggs: Experimental Studies of Ceramic Phase Equilibria (with co-organizers Waltraud Kriven, UILL-Urbana; Wai-Yim Ching, UM-KC; and Ben Burton, NIST)

26 October 2009

International Symposium on Defects, Transport and Related Phenomena: Defects and Transport in Materials Related to Fuel Cells I - 303 DLLCC

"Electromigration Behavior of BSCF under DC and Different p_{O_2} "
Jae-Il Jung; Scott Misture; Doreen Edwards
11:40 AM

27 October 2009

Glass and Optical Materials Divisional Symposium: Water in Glass II - 315 DLLCC



(INVITED) "Water Diffusion and Solubility in Oxide Melts" James Shelby
8:40 AM

Joining of Advanced and Specialty Materials 2009 (JASM XI): Brazing - 411 DLLCC



(INVITED) "Reactive Wetting between Ag-CuO and Al_2O_3 "
Jared Friant¹; Alan Meier¹; K. Scott Weil²; Jens Darsell²
(¹AU; ²Pacific Northwest National Lab)
2:00 PM

Nanotechnology for Energy: Session III - 409 DLLCC

"Synthesis of Nanoporous Mg Spinel through Selective Reduction of Nickel"
Brenden Hill; Michelene Miller Hall; Scott Misture
9:20 AM

28 October 2009

Fuel Cells: Materials, Processing, Manufacturing, Balance of Plant and Systems Operation: Electrolytes I - 324 DLLCC

"Interfacial and Grain Boundary Phenomena in Composite Electrolyte Materials for SOFC Applications"
Adam Willsey¹; Vasantha Amarakoon¹; Gary Del Regno¹; Harry Tuller²; WooChul Jung² (¹AU; ²MIT)
10:00 AM

Glass and Optical Materials Divisional Symposium: Glass Properties - 315 DLLCC

"Edge-Strength of Thin Chemically Strengthened Glass" Patrick Kreski; Arun Varshneya
10:20 AM

"Analysis of Nonlinear Deflections during Ring-on-Ring Strength Testing of Thin Chemically Strengthened Glasses"

Patrick Kreski; Jeffrey Olin; Arun Varshneya
11:20 AM

Next Generation Biomaterials: Advanced Biomaterials II - 334 DLLCC

"Attenuation of the Inflammatory Response in RAW 264.7 Macrophages with Gallium-Doped Bioactive Glasses"
Matthew Hall¹; Qi Zhang¹; Lisa Flick² (¹AU; ²URMC)
8:40 AM

International Symposium on Innovative Processing and Synthesis of Ceramics, Glasses and Composites: Characterization and Modeling - 311 DLLCC

"A Comparative Study of Thermal Behavior of Iron and Copper Nanofluids"
Kaustav Sinha¹; Barkan Kavlicoglu²; Yanming Liu²; Faramarz Gordaninejad¹; Michael Saterlie³; Olivia Graeve³ (¹U Nev, Reno; ²Advanced Materials and Devices, Inc.; ³AU)
11:00 AM

29 October 2009

Controlled Processing of Nanoparticle-Based Materials and Nanostructured Films: Nanostructure-Based Processing - 408 DLLCC

"Spectrally Selective Coatings for Solar Applications" Doreen Edwards
11:00 AM

Phase Equilibria Symposium in Memory of Dr. Richard Spriggs: Phase Transformations in Oxides and Phase Equilibria in Intermetallics - 302 DLLCC



(Invited) "In-situ Studies of Phase Transitions Driven by Oxygen Activity"
Scott Misture
10:00 AM

Glass and Optical Materials Divisional Symposium: Glass Structure - 315 DLLCC

"Compositional Study of Neutron Detecting Glasses" Kathryn Goetschius¹; James Shelby¹; Alan Huston² (¹AU; ²Naval Research Laboratory)
8:20 AM

"Nanocrystal Formation in Glasses"
John Rich; James Shelby
10:20 AM

International Symposium on Innovative Processing and Synthesis of Ceramics, Glasses and Composites: Powder Synthesis, Sintering and Microstructure-Properties Relationships - 311 DLLCC

"Exploring Powder Particle Size Correlations during Reverse Micelle Synthesis of Oxide Nanoparticles"
Brandon Williams; Olivia Graeve
10:00 AM

"Microstructural Characterization of Liquid-Phase Sintered Alumina Using the Glass Formation Boundary Theory"
Thomas Lam; Keith DeCarlo; William M. Carty
10:40 AM

Poster Presentations 27 October 2009 AM

Ceramic and Glass Materials

059 - "Formation of Magnetic Glass Microspheres" Amanda Kolehmainen; James Shelby

017 - "Nitrogen-Doped Titanium Dioxide Thin Films: Processing and Material Properties" Anthony Munto; Nathan Mellott

Environmental and Energy Issues

033 - "Investigation of Strength, Stability, and Burnout of Environmentally Friendly Binders for Ceramic Dry Pressing"
Andrew Ivovich; Elana Lewis; Steven Pilgrim

137 - "N-Type Thermoelectric Oxides Based on Hybrid Lattice Structures"
Emily Asenath Smith; Doreen Edwards

057 - "Selective Ion-Exchange of Aurivillius Photocatalysts" Victoria Knox; Eric Nichols; Meredith Ragan; Tim Nedimyer; Scott Misture

032 - "Silicone Cookware as an Alternative Drying Vessel for BaTiO₃ Production"
Eric Walton; Steven Pilgrim

108 - "Synthesis of Perovskite-Oxynitrides"
Matthew Brophy; Steven Pilgrim; Walter Schulze

147 - "Viscous Silicate SOFC Glass Sealants"
Mark Naylor; James Shelby; Scott Misture

Fundamentals and Characterization

136 - "Effect of Density and Microstructure on Ion Transport in $M_2(WO_4)_3$ (M = Al, In, Sc)" Jake Amoroso; Doreen Edwards

165 - "Formation, Stability, and Electrical Studies of Polycrystalline $A_xGa_{4-x}Ti_{1-x}O_8$ ($x \leq 0.7$) for A= Na, Li, Ag, K, and the ratios Na:Li, Na:Ag, Na:K" Jake Amoroso; Doreen Edwards

CSC-SUNY China 150 Program holds closing ceremony in Chengdu

"CSC-SUNY China 150" program students welcome SUNY to Chengdu



Representatives from each of the 150 SUNY campuses which hosted students displaced from their homes by the devastating May 2008 earthquake in China's Sichuan province were guests of the Chinese Scholarship Council (CSC) at the closing ceremonies held at Southwest Jiao Tong University, Chengdu.

Dr. Alastair Cormack, professor of ceramic engineering and founding Dean of the Inamori School of Engineering, received a warm welcome from former AU students (l-r) Yuanxin Zheng, Bing Chen, HuanHuan Pan, Xiajun Li, and Wei Lai. All are currently juniors in their home institutions.

Scholarship *(continued from page 1)*

University (provided certain academic standards are maintained). All awards are per year for 4 years.

First place is \$2,500 (\$10,000 total)
Second place is \$2,000 (\$8,000 total)

Third place is \$1,500 (\$6,000 total)

After the morning exam, students and their chaperones will tour laboratory facilities in the Inamori School of Engineering - including the STEP lab, Hall of Glass Science, Binns-Merrill Hall and McMahon Engineering Building.

Lunch on campus will be in AU's Ade Dining Hall, after which all will reassemble in Roon Lecture Hall where the scholarship winners will be announced.

For more information or an electronic registration form please contact: Marlene Wightman, Director of Continuing Education/Outreach, Phone: 607.871.2425, wightman@alfred.edu.

Lecture *(continued from page 1)*

Tuller, an MIT faculty member since 1975, has a distinguished career which has brought numerous honors and awards. He is a fellow of the American Ceramic Society (and recipient of the ACerS F.H. Norton Award) and was elected to the World Academy of Ceramics in 2006. He has been awarded honorary degrees from the University

of Provence, Marseilles, and University of Oulu, Finland.

Tuller has published over 335 articles, co-edited 14 books and has been awarded 22 patents. He is Editor-in-Chief of the Journal of Electroceramics and Series Editor of Electronic Materials: Science and Technology. Tuller is co-founder of Boston MicroSystems, a

pioneer in silicon carbide-based MEMS technology and devices.

The lecture will be followed by the McMahon Award Luncheon in Susan Howell Hall. For more information or to make a reservation for the luncheon contact Marlene Wightman, Director of Continuing Education/Outreach, Phone: 607.871.2425, wightman@alfred.edu.

McMahon *(continued from page 1)*

are brought into use throughout this academic year.



Phase II renovation, focusing on the north wing's third floor, is in final planning stages and expected to begin in Summer 2010. A total of eight phases in the overall renovation of McMahon Building are envisaged.

New classroom space and a laboratory for optical microscopy was also completed this summer, an unrelated project necessitated by the presently-underway conversion of the former Schein-Joseph Museum, optical microscopy and Center for Glass Research areas in Binns-Merrill Hall to the new Museum of Fine Ceramics and its affiliated teaching, demonstration and laboratories spaces.

Let there be light!

New windows in McMahon were a separate project to improve energy efficiency and increase comfort levels. The new custom-designed windows, enhance the classic building facade, feature lowE double-panes in insulated frames. Removal of the old windows began in mid-May 2009 with the last unit installed in September.

Classrooms are brighter and much quieter! Rooms that were too hot for use on the sunny south side or too cold on the north side are now all more comfortable and conducive to work and study. All the openings are screened to encourage use of natural ventilation when our Alfred weather permits, too!



Towler appointed Inamori Professor

Dr. Mark Towler is the most recent addition to the Inamori School of Engineering faculty, joining us as Inamori Professor of Materials Science and Engineering. Towler



comes to AU from the University of Limerick, Ireland, where he and his group did ground-breaking biomaterials research in the Materials and Surface Science Institute.

Towler's group is working on developing novel glass and ceramic-based clinical materials, to repair

and restore skeletal tissue. This includes the development of bioactive, antibacterial cements for spinal and maxillofacial applications, bioactive glasses for bone void filling, coatings to inhibit the proliferation of hospital superbugs such as MRSA and bioactive ceramics for dental applications.

Pye tapped to head new publication

Dr. L. David Pye, dean emeritus of the NYS College of Ceramics, has agreed to serve as the founding editor of a new peer-reviewed quarterly to be called the International Journal of Applied Glass Science. IJAGS will be the latest addition to the American Ceramic Society's technical publications.



being called upon to play a role in many of the world's emerging technologies, including energy, medical, transportation, construction, environmental, optical and defense technologies.

ACerS President John Kaniuk says IJAGS will encompass the description, application, modeling, experimental investigation and manufacture of glass materials.

Pye will be aided by an international advisory board. Pye, who is the past president of ACerS, says the new journal "will advance all of the branches of materials science and

engineering, and it will support the growing role of glass applications throughout society."

The first issue of IJAGS will be released in March 2010, produced in partnership with leading science publisher Wiley-Blackwell. ACerS and Wiley-Blackwell already have a strong publishing track record and jointly produce two other peer-reviewed journals: The Journal of the American Ceramic Society and the International Journal of Applied Ceramic Technology.

Faculty news in brief...

Dr. Olivia Graeve, associate professor of materials science and engineering, hosted the "Women in Science" Luncheon at the recent XVIII International Materials Research Congress, Cancun, Mexico, August 16 - 21, 2009. The networking luncheon, organized to promote active connections and the advancement of women in science, featured keynote speaker Dr. Gabriela Díaz Guerrero, professor in the Institute of Physics and Chair of the Department of Chemical Physics at the Universidad Nacional Autónoma de México.



Shanti Jonchhe, Chemical Safety Coordinator for Inamori School of Engineering, delivered a seminar on

"Chemical Safety in the Laboratory" to a very enthusiastic group of graduate students in the newly formed Biotechnology Department of Tribhuvan University, Nepal. She has been invited to deliver talks on chemical safety in other Universities in Nepal in future.

Jonchhe, who holds a MEd from Alfred University, also holds a degree in MSc in Botany from Tribhuvan University, Nepal.

Dr. Jiangxin Tang, professor of electrical engineering, presented the paper "Real-Time Adaptive Phase-Lead Controller for Maglev Systems Using Digital Signal Processors" at the World Congress on Engineering 2009



in London, UK, July 1-3, 2009. Tang's research on signal processing for mag-lev systems control is currently supported by the National Science Foundation.

Dr. Scott Misture and PhD student Eric Nichols have recently been awarded time on Los Alamos National Lab's High-Pressure-Preferred-Orientation Neutron Diffractometer (HIPPO) for their study of ion-exchanged Aurivillius phase materials. Several of the ion-exchanged versions of these compounds have shown an increased ability to promote the breakdown of water over that of the unaltered materials. The structural origin of this improvement is not understood at this time and is currently being investigated by Misture and his research group.

Glass goes to new heights - but don't look down!

The New York Times has discovered materials science! The Times recently published "Builders shatter old limitations on using glass" (by Henry Fountain, July 7, 2009) on the scientific advancements being made to strengthen glass for the expanding use of the material in architecture. The glass experts interviewed included **Dr. Harrie Stevens**, emeritus professor of glass science and director of the Center for Glass Research, and **Dr. Bill LaCourse**, professor of glass science and unit head of the NY State College of Ceramics at Alfred University. Also interviewed was Dr. Carlo Pantano, professor of materials science at Penn State.

For structural purposes, glass is often strengthened the old-fashioned way - by tempering. This puts the surface under compression, so that even more tensile force

is needed for cracks to grow. Tempered glass may take longer to crack, but it can still break. A primary concern when building with glass is what happens if and when a component breaks. That's where lamination comes in.

In the Sears Tower project, multiple glass sheets (one-half-inch thick) were bonded with thin polymer interlayers. The interlayers add strength and, should one of the glass layers break, keep the structure together, and the pieces from falling.



A transparent structure extending outward from the 103rd floor of the Sears Tower in Chicago lets visitors step onto a floor of glass a quarter-mile above the sidewalk

New website announced - Fractography of Glasses and Ceramics VI

June 5-8, 2011

Omni Jacksonville Hotel
Jacksonville, Florida

Preparations are underway on the latest in this important conference series, so start preparing your contribution! The conference has been rescheduled to June 5-8, 2011, and located in Jacksonville to better serve the needs of the scientific community. Keep abreast with all Fractography conference updates at the new conference website - bookmark <http://fractographyconf.com> (website currently under construction).

For the 2011 meeting, co-organizers include **Dr. James Varner**, professor of ceramic engineering. Varner was an organizer of

Fractography of Glasses and Ceramics V. Dr. Jeffrey J. Swab, a ceramic research engineer at the U.S. Army Research Laboratory (Ordnance Materials Branch), Aberdeen, MD; Dr. Jill Glass, manager of the Materials Reliability Department at Sandia National Laboratories in Albuquerque, New Mexico; and Dr. Jack Mecholsky, Associate Chair and Professor of materials science and engineering at the University of Florida.

Conference proceedings will be published by The American Ceramic Society-John Wiley and Sons as part of the Ceramics Transactions Series.

Varshneya appointed entrepreneurial "Scholar in Residence"

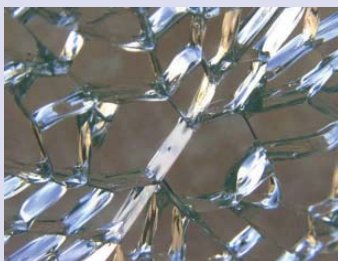
Dr. Bill Hall, acting Dean of Alfred University's College of Business, has announced the appointment of **Dr. Arun Varshneya**, professor of glass science, as a "Scholar in Residence" in the College of Business for the 2009-2010 academic year.



Varshneya is the president of Saxon Glass Technologies, Inc. of

Alfred, NY, founded in 1996 with Dr. Bill LaCourse.

The appointment includes a courtesy appointment as Professor of Entrepreneurial Business Administration.



Fractography of Glasses and Ceramics VI

5-8 June 2011

Bookmark

fractographyconf.com

Fréchette honored with new award at Brazil glass congress

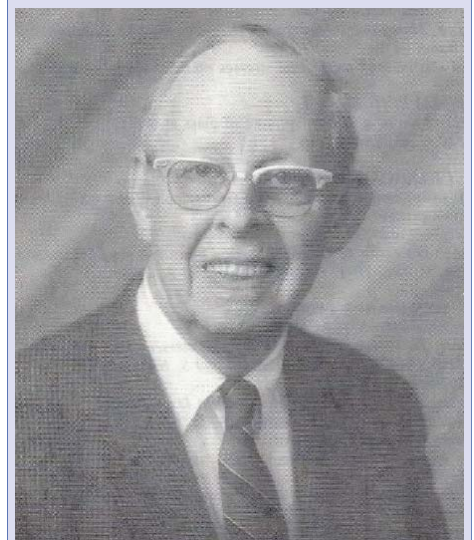
XII International Conference on the Physics of Non-Crystalline Solids
September 6-10, 2009
Iguassu Falls, Brazil

An international gathering of the finest researchers in glass met in September at Iguassu Falls in southern Brazil at the XII International Conference on the Physics of Non-Crystalline Solids (PNCS). As the premier institution in advanced research and education in glass science, the Inamori School of Engineering was well represented with invited talks by **Dr. Alastair Cormack**, professor of ceramic engineering, and **Dr. Arun Varshneya**, professor of glass science. **Dr. Harrie Stevens**, emeritus professor of glass science also attended.

For the scientists representing Alfred University and for those many AU alumni present, a highlight of this event was the inaugural presentation of the "International Young Researcher" award set-up in the memory of the late Professor Van Derck Fréchette. The award recognizes an international researcher not older than 30 years of age who participates in the conference

on the physics of non-crystalline solids and has demonstrated contribution to the advancement of glass science and engineering through scholarly research, publication, and planned future involvement in the education, research, or manufacturing of non-crystalline solids. The purpose of the award is not only to remember a distinguished individual, but help advance the professional growth of a young glass scientist at a critical time when professional goals and future employment opportunities coalesce.

The inaugural award was won jointly by Stanislava Stara and Blanka Svecova, both of the Institute of Chemical Technology, Prague (Czech Republic), and comprised a glass trophy for display at their home Institute and a certificate signed by Varshneya, AU emeritus professor Dr. L. David Pye (past conference chair), and conference chair Prof. Edgar D. Zanotto of the University of San Carlos (Brazil), for each of the two winners.



Van Derck Fréchette achieved international renown for himself, and for AU, in the field of fractography. His book, *Failure Analysis of Brittle Materials*, is still considered a standard reference in the field.

Fréchette founded several important international conference series, including the "Physics of Non-Crystalline Solids," started at the request of the National Research Council, and the "Fractography of Glass and Ceramics" series. He authored many scientific publications and was the editor of several books. In 1955, he was one of the first Americans to receive a Fulbright Senior Research Award, which he used to conduct research in Germany. His achievements earned him Distinguished Life Membership in the American Ceramic Society.

Fréchette established the Study Abroad Program for the NYS College of Ceramics, starting the program after a 1968 trip to Egypt where he saw the possibilities for ceramic engineering students to spend a semester abroad, learning about another culture while maintaining progress toward their degree. Through Fréchette's personal contacts, the College was able to form exchange programs with schools in Germany, France, England, Italy, Spain, Switzerland and England.

For his efforts, the College dedicated Friendship Park in honor of Fréchette. The park was dedicated on April 25, 2000, as part of its centennial celebration.

The endowed Fréchette Chair professorship, currently held by Dr. Alastair Cormack, was created by the College in 1999 to honor his lifelong achievements. Fréchette died in 2001 at the age of 85.



At PNCS Iguassu Falls (from l-r), Bev and Harrie Stevens, Darshana Varshneya, Alastair Cormack and Arun Varshneya (and yes, that is the Alfred Sun!).

AU Engineering News is a print version of our on-line newsletter, published four times a year. For complete news and updates, go to <http://engineering.alfred.edu/newsletter>

The AU Engineering News is edited by Dr. Anna E. McHale. Questions or comments about our newsletter can be sent to her at soenews@alfred.edu.

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