Professor John O'Connell is retiring

You are invited to the University of Virginia retirement celebration for John O'Connell who is retiring after 47 years of educating students at the University of Florida and Virginia. All of John's Gator Alumni are cordially invited to the UVa reception at the AIChE annual meeting. Click [here](#) for more information.

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Dr. Ranga Narayanan has received the Fred and Bonnie Edie Professorship

Professor Narayanan has been with the University of Florida since 1981. He works in the field of pattern formation and nonlinear dynamics in Chemical Engineering. He directs an NSF PIRE center in Multiphase Flows that emphasizes Patterns and Instabilities. This is the largest of its kind in the United States. He was a Humboldt, Fulbright and JSPS Fellow in 1989, 2001 and 2009 and has recently received a Fulbright Distinguished Chair Fellowship. He is a co-author of a book on "Interfacial Instabilities" published by Springer Verlag (2002) and another book on "Spectral Methods in Transport Phenomena" currently in press by Springer.

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Dr. Jason Weaver has received the Charles A. Stokes Professorship

Dr. Weaver is a Florida native and earned B.S. and M.S. degrees in chemical engineering from the University of Florida in 1992 and 1993. He performed his doctoral studies in chemical engineering at Stanford University under the guidance of Robert Madix, and completed a Ph.D. degree in 1998. He joined the faculty at the University of Florida in 1999 and is currently a Professor of Chemical Engineering with an affiliate appointment in the Department of Chemistry. Dr. Weaver works in the area of surface science and catalysis, focusing particularly on oxide surface chemistry and growth. His research group conducts ultrahigh vacuum surface science experiments and molecular simulations to investigate chemical phenomena at solid surfaces. Dr. Weaver and his students have made key advances in understanding the formation and surface chemical properties of metal oxide films which develop on Pt and Pd surfaces in applications of oxidation catalysis. Their recent work focuses on the properties of chiral oxide surfaces as well as the activation and oxidative transformations of alkanes on metal oxide surfaces. Dr. Weaver's research has been highlighted in several top journals and invited talks and is currently funded by the DOE, NSF and the ACS-PRF.

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Top 20 Most Downloaded JVST Author

Dr. Fan Ren's JVST article is among the top 20 most downloaded articles. His articles can be found at these links: [JVST B](#) and [JVST A](#)

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Tanmay Lele receives UF Provost's Excellence Award for Assistant Professors

Tanmay Lele has been selected to receive the 2012 UF Provost's Excellence Award for Assistant Professors. The award supports research that can be used to fund travel, equipment, books, graduate students, and other research-related expenses.
Dr. Ranga Narayanan receives Distinguished Achievement and Educator Award from the Engineers Council

The award is for internationalization of research and education in the field of fluid mechanics.

Mark Orazem receives Henry B. Linford Award

Dr. Orazem will be recognized for excellence in teaching in subject areas of interest to the Electrochemical Society.

Fan Ren selected as Fellow of the Materials Research Society and Fellow of the SPIE

Dr. Ren's citation from the MRS is "for the development of advanced semiconductor processing techniques", and from the SPIE is "for advancement of science and technology in optoelectronic materials and devices.

Jennifer Curtis to become Associate Dean for Research and Facilities in CoE

Dr. Curtis has previously served as Department Chair of Chemical Engineering at UF and Associate Dean of Engineering and Department Head of Freshman Engineering at Purdue University. Dr. Curtis is a recipient of a Fulbright Senior Research Scholar Award, a NSF Presidential Young Investigator Award, the American Society of Engineering Education’s (ASEE) Chemical Engineering Lectureship Award, the Eminent Overseas Lectureship Award by the Institution of Engineers in Australia, the ASEE’s Sharon Keillor Award for Women in Engineering, and the AIChE Fluidization Lectureship Award. She has served on the National Academy of Engineering’s (NAE) Committee on Engineering Education and has participated in two NAE Frontiers of Research Symposia (2003 and 2008). Currently, she is a Board member of the National Academies’ Chemical Science Roundtable, as well as the Council for Chemical Research. Congratulations Jennifer on this distinguished accomplishment!

Mark Orazem – President of International Society of Electrochemistry

Professor Mark Orazem is the President of the International Society of Electrochemistry. The International Society of Electrochemistry (ISE) is a non-profit organization based in Lausanne, Switzerland, which now comprises about 3,000 members from more than 70 countries. Annual and Topical meetings are held throughout the world, with meetings held in Europe, Asia, Australia, North and South America, and, soon, in Africa. The society journal, Electrochimica Acta, provides a high-impact-factor vehicle for sharing ideas and results. http://www.ise-online.org/
Professor Mark Orazem is a co-author of a paper (J.-B. Jorcin, M. E. Orazem, N. Pébère, and B. Tribollet, "CPE Analysis by Local Electrochemical Impedance Spectroscopy," Electrochimica Acta, 51 (2006), 1473-1479.) listed as one of the top 10 cited papers published in Electrochimica Acta in the past 5 years. The paper uses local impedance spectroscopy measurements to associate constant phase element impedance response to surface or normal distributions of time constants.

Professor Fan Ren in collaboration with Stephen Pearton, has a new book titled "Semiconductor Device-Based Sensors for Gas, Chemical, and Biomedical Applications" published by CRC Press. This book provides a forum for the latest research in semiconductor based sensors for gas, chemical, biomedical applications. It features a balance between original theoretical and experimental research in basic physics, device physics, novel materials and device structure, process, and system bearing in mind the transformation of research into products and services related to dual-use applications.

Professor Richard Dickinson and his collaborators at the University of Hannover have elucidated the biochemical reactions used by cells to assemble the protein actin into cytoskeletal filaments, which are required for several essential cellular processes, such as cell crawling, cell adhesion, and cell division (EMBO J, Jan 2011). This study shows that the protein VASP polymerizes actin by a processive insertional mechanism, consistent with the "actoclampin" model for polymerization motors proposed by UF Professors Dickinson and Daniel Purich (Biophys J, 2002, 2004).

In a recent paper (EPSL - doi:10.1016/j.epsl.2010.10.026) Piotr Szymczak (University of Warsaw) and Tony Ladd used linear stability analysis to show that fracture dissolution is an inherently non-uniform process. This contradicts the standard model in speleogenesis (the study of cave formation), which assumes a fracture open uniformly across its width. Instead highly localized dissolution patterns inevitably develop from the initial instability, which can reduce the time for dissolution by orders of magnitude. The work helps illuminate the means by which underground cave formations develop. A popular account will appear in the January issue of Science News, "Dissolving a puzzle: Science News January 1st 20 11; Vol 179 #1 p.8

For his contributions to the development of lattice-Boltzmann techniques, Professor Tony Ladd was honored with the "Thomas Baron Award in Fluid-Particle Systems" by the American Institute of Chemical Engineers.
Professor Ziegler – Science Spotlight

Professor Ziegler’s group recently reported a simple method to prevent the collapse of nanostructured features. In a study published in ACS Applied Materials and Interfaces, they show that an electric field can counteract the forces due to surface tension that cause nanowire arrays to aggregate. This method enables the fabrication of nanowire arrays with high surface area, which may be important to microelectronics, solar cells, and batteries.

Click here for more details

$3.2 million NSF Research and Training Grant Awarded to Professor Narayanan and Collaborators

An investigating team led by Prof. Ranga Narayanan (Principal Investigator, ChE) has won a major research and training grant from the US National Science Foundation. This major funding from NSF's Office of International Science and Engineering is part of the Partnership in International Research and Education (PIRE) program. It is a first for the College of Engineering, the first to be awarded to the University of Florida and the first in the country in the general area of fluid mechanics. The grant will support research in areas ranging from interfacial flows and patterns to suspension and particulate flows, microfluidics, flow control and turbulence.

Click here for more details

Professors Weaver and Asthagiri – Science Spotlight

In a recent collaborative study published as a cover article in the Journal of Physical Chemistry C, the research groups of Professors Jason Weaver and Aravind Asthagiri discovered a facile mechanism for H2 dissociation on a palladium oxide (PdO) surface. They found that an adsorbed H2 molecule dissociates on the PdO surface through a process called quantum mechanical tunneling, which allows H2 to undergo rapid dissociation at temperatures as low as 100 K. This discovery may have important implications for modeling the catalytic oxidation of H2 by transition metal oxides for applications such as fuel cells, catalytic combustion, selective oxidation and pollution control.

Click here for more details

Fan Ren – 2010 Albert Nerken Award

Professor Fan Ren has won the 2010 Albert Nerken Award. This is one of the premier professional awards bestowed by the American Vacuum Society (AVS). The citation reads "For the development of advanced processing techniques for compound semiconductors". He will receive a cash award, certificate and an honorary lectureship at the 57th AVS International Symposium and Exhibition in Albuquerque in October.

Tanmay Lele – NSF Career Award

Professor Tanmay Lele has been selected to receive the highly prestigious NSF CAREER award. His research is on a fundamental question in cell biophysics: "How does mechanical connectivity between the nucleus and the cytoskeleton control key cell functions like mechanosensing, motility and adhesion?"
Jennifer Sinclair Curtis – New ASEE Fellow

Professor Jennifer Sinclair Curtis has been selected to become a Fellow of the American Society for Engineering Education for her outstanding contributions to engineering education.

Sergey Vasenkov – NSF Career Award

Professor Sergey Vasenkov has been selected to receive the highly prestigious NSF CAREER award. The title of his project is "Fundamentals of the Relationship between Pore Structure and Transport of Light Gases in Materials with a Hierarchy of Pore Sizes". The project focuses on obtaining fundamental understanding of gas diffusion in porous membranes and related materials with a broad distribution over pore sizes.

Sergey Vasenkov – Science Spotlight

Professor Vasenkov's group has recently introduced a new NMR experimental approach, which allows investigating details of transport of ions and molecules on length scales as small as 90 nm with high sensitivity resulting from high (17.6 T) magnetic fields. His group used this method to report the first measurements of the permeability of the boundaries of membrane domains for lipid molecules in lipid membranes. The technique was also used to detect and study the anomalous relationship between diffusion coefficients and size of ions in ionic liquids. Read more about his work in two papers recently published in the Journal of Physical Chemistry.

Anuj Chauhan – Technology Spotlight

Ophthalmic drug delivery by eye drops is highly inefficient as only about 2-5% of the applied drug reaches the target tissue with the rest entering systemic circulation and possibly causing side effects. Professor Chauhan's group have developed contact lenses that can release ophthalmic drugs at therapeutic doses for as long as a month. Their recent study reported in the journal Biomaterials suggests that this approach can be used to treat glaucoma.

Fan Ren – Technology Spotlight

Professor Ren's group has successfully used high electron mobility sensors for sensing glucose in the breath, recently published in the Journal of Diabetes Science and Technology. With these sensors, it is no longer necessary to draw blood from the arm, a simple breathing exercise is enough!

[Click here for more details]
Jennifer Sinclair Curtis – Fulbright Research Scholar

Professor Jennifer Sinclair Curtis has received a Fulbright Research Scholar Award to Australia for 2010-2011. The topic of her research is "Computational Modeling of Particulate Flow". She will be hosted by the University of New South Wales in Sydney.

Fan Ren – Named New IEEE Fellow

Professor Fan Ren has been selected to become IEEE Fellow "for contributions to processing technologies for compound semiconductor devices."

Jennifer Sinclair Curtis – New AIChE Fellow

Professor Jennifer Sinclair Curtis has been elected AIChE Fellow "for pioneering contributions to particle technology, simulation of multiphase, fluid-particle flows, and outstanding national leadership in chemical engineering education and service".

Oscar Crisalle: Excellence in Teaching, Learning and Technology Award

Professor Crisalle received this award at the International Conference on Teaching and Learning in 2010. The award is granted to a faculty member who has contributed in the most highly creative ways to teaching, learning, and technology in higher education.

Sergey Vasenkov – 2009-10 College of Engineering Teacher of the Year

This highly competitive and prestigious award recognizes Professor Vasenkov as one of the most successful and creative teachers in the department. Using inquiry-based and problem-based teaching styles Professor Vasenkov strives to create a productive and pleasant atmosphere in his classroom. It is remarkable that he has achieved this recognition of his teaching after less than four years at the University of Florida.

Fan Ren – Named UF Distinguished Professor

Professor Fan Ren has been awarded the title of Distinguished Professor at the University of Florida for his contributions to the development of processing techniques for high speed compound semiconductor electronic devices such as high electron mobility transistors (HEMTs), heterojunction bipolar transistors (HBTs) and metal oxide semiconductor field effect transistors (MOSFETs)
Ranga Narayanan – Invitational Fellowship and Distinguished Teaching

Ranga Narayanan has received an Invitational Fellowship for Senior Scientists from The Japan Society for the Promotion of Science (JSPS) for his outstanding research in interfacial fluid mechanics. This fellowship will involve collaborative research at the Japanese Space Agency and invited lectures at several Japanese universities.

Ranga Narayanan has also been inducted into the University of Florida Academy of Distinguished Teaching Scholars.

Spyros Svoronos – Teacher of the Year Award

Spyros Svoronos has received the UF Engineering College Teacher of the Year award.

Fan Ren – New APS Fellow

Fan Ren has been elected as APS Fellow. The citation for his nomination is as follows: "For contributions to the development of device processing technologies for compound semiconductor devices based on GaAs, InP, ZnO and GaN"

Richard Dickinson – BMES Outstanding Paper Award

Professor Richard Dickinson has received an outstanding paper award from the Biomedical Engineering Society in a special issue of the new BMES journal "Cellular and Molecular Bioengineering". His paper entitled "Multi-scale simulation of particle propulsion by actin-based motility" was highlighted at the 2008 BMES Annual Meeting in October 2008.

Jason Weaver – “Hot Articles” in Surface Science

Professor Jason Weaver has published two articles that appear in the “Top 25 Hottest Articles in Surface Science”. The two articles are entitled “Adsorption and abstraction of oxygen atoms on Pd(111): Characterization of the precursor to PdO formation” (Vol. 602, Issue 7) and “A PdO(101) thin film grown on Pd(111) in ultrahigh vacuum” (Vol. 602, Issue 9).
Mark Orazem – New Book

Professor Mark Orazem in collaboration with Bernard Tribollet, has a new book on "Electrochemical Impedance Spectroscopy" published by Wiley. Mark has also received the 2008 Florida Blue Key Distinguished Faculty Award in recognition of scholarly achievement through research and distinguished teaching.

Tim Anderson : Awarded Distinguished Professor

Professor Tim Anderson has been awarded the title of Distinguished Professor at the University of Florida for his significant research contributions to the fields of electronic materials processing, thermochemistry and phase diagrams, chemical vapor deposition and bulk crystal growth, and photovoltaics. He has also been named the Director of the Florida Energy Systems Consortium.

Jennifer Sinclair Curtis : 2008 ASEE Chemical Engineering Lectureship Award

Professor Jennifer Curtis has been selected to receive the 2008 ASEE Chemical Engineering Lectureship Award. This award is sponsored by Chemstations, Inc., and it is presented to a distinguished engineering educator to recognize and encourage outstanding achievements in an important field of fundamental chemical engineering theory or practice. This year's award was given to Professor Curtis in recognition of her sustained record of outstanding achievements in the fields of particle technology, multiphase flow and computational fluid dynamics (CFD), and her contribution to course development and teaching materials for particle technology and CFD education. The award also recognizes her interest in the progression of chemical engineering through participation in professional and educational societies.

Tim Anderson : 2007 AIChE Warren K. Lewis Award

Professor Tim Anderson has been awarded AIChE's most prestigious education award - the Warren K. Lewis Award. This award is given for scholarly contributions to engineering education research and innovation, dedication to career development of new engineering faculty, and stewardship of the Chemical Engineering Education journal. Professor Anderson formally received this honor at the Awards Ceremony at the 2007 Annual AIChE Meeting.

Oscar Crisalle : UF Academy of Distinguished Teaching Scholars

Professor Oscar Crisalle has been inducted into the University of Florida's Academy of Distinguished Teaching Scholars. The Academy recognizes faculty who have excelled as teaching scholars throughout their careers and provide the very best educational experiences for undergraduate and graduate students at UF. Recipients of this honor are awarded lifetime Academy membership.
Peng Jiang: 2008 NSF Career Award

Professor Peng Jiang has been awarded the National Science Foundation’s prestigious 2008 CAREER award for junior faculty. Professor Jiang joined our department as an assistant professor in August 2006. He obtained his Ph.D. in materials chemistry at Rice University and was a postdoctoral fellow in the Department of Chemical Engineering at Princeton University. His current research interests include self-assembled photonic crystals, surface-plasmon-enabled nanooptical devices and biosensors, ultra-high-density magnetic recording media, semiconducting polymer devices, and biomimetic antireflection coatings for efficient photovoltaics and artificial nares. Professor Jiang has published more than 38 papers with over 1900 citations in prominent journals, such as Science, Nature Photonics, Physical Review Letters, Journal of the American Chemical Society, and Angewandte Chemie International Edition. He has one issued patent and six pending applications. Professor Jiang group’s recent work on biomimetic broadband antireflection coatings has attracted great public interest and been featured in Nature, Laser Focus World, Materials Today, and many other public media.

Tanmay Lele: 2007 American Heart Association Grant

Professor Tanmay Lele has received The American Heart Association's National Scientist Development Grant, which supports highly promising beginning scientists in their progress toward independent research careers. The four-year grant funds research projects that are broadly related to cardiovascular function and disease, stroke, or to related basic science, clinical, bioengineering/biotechnology, and public health problems.

Richard Dickinson: New AIMBE Fellow

Richard Dickinson, Professor and Chair of Chemical Engineering, was elected to the College of Fellows of the American Institute for Medical and Biological Engineering for his significant contributions to the field.