

UWM Chemist

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Chemistry Building

Welcome to the first issue of the UWM Chemist. The purpose of this newsletter is to keep in touch. We hope to provide useful and interesting information including news about current departmental events and any updates from our alumni. In order to keep up with current information, we encourage our alumni and friends to submit any suggestions or news that should be included in future newsletters.

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Welcome to Our First Issue

It's been a while since we've been in touch about the happenings at UWM's Department of Chemistry and shared the excitement of our activities, faculty, research, students and alumni.

I am very happy to report that our Department is alive and well! Our faculty members are some of the most productive teachers and researchers on the UWM campus. We have a thriving undergraduate program

and continue to produce some of the finest graduate students in the nation.

You can check us out on the Web at www.uwm.edu/Dept/Chemistry. This site includes faculty research pages and email links to contact us.

We also hope to hear from you! Please write or email us and tell us about yourself, your family, and what you are currently doing. We intend to keep in touch, and hope that you will do the same!



Dennis Bennett, Chair

We are also in the process of a substantial fundraising effort to increase the quality of our programs and hope that you can see the way to a donation. An envelope is enclosed in this issue for that purpose.

Best regards,

Thank you for your contributions!

Our Fall fundraiser campaign has gotten off to a great start.

We would like to thank the following donors:

Gul Afshan of Whitefish Bay, Wisconsin.

Dr. Stephen W. Andruski of Clifton Park, New York.

Michael DiPierro of Gurnee, Illinois.

Dr. Paul A. Gutsch and

Patricia J. Gutsch of Waukesha, Wisconsin.

Scott M. and Julie J. Huelsman of De Forest, Wisconsin.

Ben S. Hui of Milwaukee, Wisconsin.

David P. Keuler of New Berlin, Wisconsin.

Dr. Alan J. Kraker of Ann Arbor, Michigan.

Dr. Gregory S. Lannoye and Cheryl L. Rennells-

Lannoye of Wildwood, Illinois.

David E. Pelino of Pittsburgh, Pennsylvania.

Dr. Daniel S. Sem of San Diego, California.

Steven M. Socol of Woodstock, Illinois.

Robert Xu of Cary, Indiana.

Marc A. Young of East Lansing, Michigan.

New Faculty and Staff

Faculty

Joseph H. Aldstadt, III
Analytical Chemistry
PhD, Ohio University

Dr. Aldstadt's research is primarily in developing new field-portable analytical methods and techniques to study the chemical and physical speciation of pollutants in the environment. High-resolution multi-detector separation methods and flow-injection techniques are studied. He is also performing kinetics studies using various electrochemical and optical techniques to try to understand the transport and fate of organoarsenicals in freshwater environments.



Dean C. Duncan

Inorganic Chemistry
PhD, Emory University

Dr. Duncan's research interests are centered on the synthesis, physical characterization, and reactivity of functional supramolecular systems that utilize metal complexes as major



structural and/or functional components. These systems are prepared by spatially organizing several different component substructures in such a way as to facilitate their

cooperative action towards a higher-order integrated function (e.g. artificial photosynthesis, directed charge transport, catalyst).

Peter Geissinger
Physical Chemistry
PhD, University of Bayreuth, Germany

Dr. Geissinger's research interests focus on the study of intermolecular interactions in solids



at a microscopic level. Particularly he is interested in determining the electric fields at the active sites of biological systems and the influence of these fields on their function. Furthermore, he is interested in fiber optic sensor technologies, particularly in their application to combinatorial chemistry.

Graham R. Moran
Biochemistry
PhD, University of New England, Australia

Dr. Moran's research interests are concerned with the activation of molecular oxygen by enzymes. Currently, the focus of this research is FeII dependent non-heme enzymes that catalyze oxygenations of aromatic compounds. As are the subsequent catalytic events in which highly reactive oxo-intermediates are directed to react along a single coordinate to give a specific product.



A. Andy Pacheco
Bioinorganic Chemistry
PhD, University of British Columbia

Currently Dr. Pacheco is concentrating his efforts on two bacterial enzymes: ammonia monooxygenase (AMO), which oxidizes ammonia to hydroxylamine, and hydroxylamine oxidoreductase (HAO), which subsequently oxidizes the hydroxylamine to nitrite. These reactions are part of the ecologically important process known as "nitrification", which is in turn part of the biological nitrogen cycle.



Staff

Charity Guzman
Program Assistant
BSEPH, University of Wisconsin, Eau Claire

Vincent Maberry
Lab Technician
MSN, Southeast Missouri State University

Retired Faculty

E. Alexander Hill
Organic Chemistry
PhD, California Institute of Technology

Dr. Hill's research was generally in the field of Physical Organic Chemistry – the investigation of the mechanism and reactivities of organic compounds. Some specific areas studied: 1) the structures and dynamics of allylic organometallic compounds, 2) ring-cleavage/cyclization rearrangements of a similar nature occur for organometallic compounds, carbonions, and free radicals, 3) secondary deuterium isotope effects.



Kenneth L. Watters
Inorganic Chemistry
PhD, Brown University

Professor Watter's research interests were directed toward studies of organometallic compounds deposited on the surfaces of refractory oxides where they might form the basis of novel heterogeneous catalyst systems or electronic materials. Professor Watters initiated investigations of the reactions of MR_x species at surfaces, partially oxide surfaces, to elaborate details of surface adsorption and decomposition that might be significant in thin film formation processes.



Alumni News

Gul Afshan (PhD '99) is currently an Assistant Professor at Milwaukee School of Engineering.

Stephen Andruski (BS '79) is a Senior Research Chemist II at Albany Molecular Research.

Jennifer Barker (BS '98) was hired by Lawter International Inc. to build and run the analytical department. Lawter has supplied chemicals and products for making every type of ink for over 60 years.

Michael DiPierro (BS '77) is currently the Technical Director at Ferro Pfaustiehl.

Luke Fisher (PhD '00) was recently promoted to Senior Applications Scientist at Accelrys software (formerly Molecular Simulations Inc.). He achieved this promotion faster than any previous employee of the company.

Paul Gutsch (BS '65) is the Senior Vice President of Cambridge Major Labs.

Michael J. Hoerres (BS '87) is currently the Client Business Manager at Incyte Genomics.

Ben Hui (PhD '91) is currently working as the Chemistry Lab Supervisor at Milwaukee Health Lab.

David Keuler (BS '92) is currently a Chemist working for Bostik Findley Inc.

Alan J. Kraker (PhD '83) is currently an Associate Research Fellow and does anti-cancer drug discovery at Pfizer (formerly Parke-Davis).

Gregory Lannoye (PhD '87) is currently working at Abbott Laboratories.

Daniel Sem (BS '86) served as the scientific founder of Triad

Therapeutics. He is now the VP of Biophysics. Triad's NMR technology for accelerating drug design was recently highlighted in C&E News (6/4/01) and Modern Drug Discovery (11/01). Triad was voted one of the top ten biotech startups of 2001 by Drug Discovery World.

Steven M. Socol (BS '78) is a Chemistry Instructor at McHenry County College.

David C. Stark (MS '77) is a Principle Chemical Systems Analyst at EAI Corporation. Currently he is deeply involved in Nuclear, Biological and Chemical Counter Terrorism across the country. He is conducting training for firefighters, police, HAZMAT, and government contract responders.

Robert Xiaoyun Xu (PhD '89) is currently working at Glaxo Wellcome Inc.

Marc A. Young (BS '93) is currently a physician for MSN Surgery.

Faculty and Staff News

Dr. James Cook is on the Editorial Advisory Board for *Medicinal Chemistry*. Dr. Cook is also a member of the Editorial Board of Expert Opinion on Therapeutic Patents. Dr. Cook also serves as a member of the Editorial Advisory Board of Current Topics in Medicinal Chemistry.

Professor Thomas Holme has been named as the next Director of the Examinations Institute of the Division of Chemical Education of the American Chemical Society. The Institute will be moving to UW-Milwaukee to begin operations in January of 2003. Professor Holme will be on sabbatical next fall to help facilitate the moving of the Institute from Clemson University. Professor Holme has recently been listed in Who's Who in America and has also

been appointed associate editor for the *Macmillan Encyclopedia of Chemistry*.

Dr. David Petering is the Director of the NIEHS Marine and Freshwater Biomedical Sciences Center. Dr. Petering is also the Director of the Institute of Environmental Health.

Robert Ponton received the Andrew's Glass Award earlier this year.

Alan Thompson is the editor of the *Amalgamator*, which is the newsletter for the Milwaukee section of the American Chemical Society. It is published five times a year and can also be viewed on the Web at: <http://alchemy.chem.uwm.edu/amalgamator/>.

UWM Chemist is written and edited by Charity Guzman, with assistance on this issue from Greg Fueger and Dr. M. Mahmud Hossain. To contribute alumni news or feedback:

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Upcoming Events

To verify times and locations, please call 414-229-4411.

January 4, 11, 13, 18, 25, 2002
Science Bag Speaker

Robert Greenler, Department of Physics, UW-Milwaukee. "Early Optics and the Painters' Art"

January 18, 2002

Distinguished Speaker Series
Nipam Patel, Department of Organismal Biology and Anatomy, University of Chicago. "The Evolution of Segmentation and Body Patterning"

January 28, 2002

Departmental Seminar
Mark Ratner, Northwestern University. "TBA"

February 1, 8, 10, 15, 22, 2002

Science Bag Speaker
John Janssen, Great Lakes Water Institute. "Fish Sense"

February 15, 2002

Distinguished Speaker Series
Russ Hille, Department of Molecular and Cellular Biochemistry, Ohio State University. "The reaction mechanism of xanthine oxidase and related enzymes"

February 25, 2002

Departmental Seminar
Joseph T. Jarrett, Department of Biochemistry and Biophysics, University of Pennsylvania School of Medicine. "Mechanistic investigations of biotin synthase"

March 1, 8, 10, 15, 22, 29, 2002

Science Bag Speaker
Richard O'Malley, Department of Mathematics, UW-Milwaukee. "From Randomness to Chaos: Math All Around Us"

March 29, 2002

Distinguished Speaker Series
John Enemark, Department of Chemistry, University of Arizona. "Chemical Paradoxes in a Vital Molybdenum Enzyme"

April 5, 12, 14, 19, 26, 2002

Science Bag Speaker
Mike Reddy, Department of Chemistry, UW-Milwaukee. "Life's Matrix: A Biography of Water Chemistry"

April 5, 2002

Distinguished Speaker Series
Clare Fraser, The Institute of Genomic Research, Rockville, Maryland. "Microbial Genome

Sequencing: Insights Into Physiology and Evolution"

April 8, 2002

Departmental Seminar
Rob Phillips, University of Georgia. "TBA"

April 12, 2002

Distinguished Speaker Series
Perry Frey, Enzyme Institute, UW-Madison. "Radical enzymology: S-Adenosylmethionine and Adenosylcobalamin as Radical Initiators"

April 15, 2002

Departmental Seminar
Cindy Dupureur, University of Missouri, St. Louis. "TBA"

April 26, 2002

Distinguished Speaker Series
Dale Kaiser, Department of Developmental Biology and Department of Biochemistry, Stanford University. "Two gliding motility machines"

May 6, 2002

Departmental Seminar
Kyun Woon Jung, University of South Florida. "Novel Organometallic Catalysis for Efficient Carbon-Carbon Bond Formation"

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