



September Dinner Meeting

Hydroxyl Radical Mediated Transformations of the Herbicide 2,4-D and Related Compounds

Dr. Julie Peller
Monday, September 22nd, 2003

Dinner (Cost: \$20.00) Noble Family Dining Hall St. Mary's College
Menu: Hickory Cherry BBQ Salmon with Herbed Orzo and White Chocolate Mousse
Social Time: 5:30 p.m.
Dinner: 6:00 p.m.
Seminar: 7:00 p.m. Room 105 Science Hall

Abstract:

The fate of the herbicide 2,4-dichlorophenoxyacetic acid (2,4-D) in the environment is of great interest due to its high quantity usage and its chlorinated aromatic nature. It is highly susceptible to oxidative degradation in aqueous solutions, producing a variety of chlorinated aromatic intermediates. Mechanistic and kinetic details of 2,4-D oxidation have been elucidated using the advanced oxidation processes of radiolysis, sonolysis and photocatalysis. The main intermediate is 2,4-dichlorophenol (2,4-DCP), which, in some systems, displays a degree of resistance to further oxidative degradation. This intermediate, along with 2-(2,4-dichlorophenoxy)propionic acid (2,4-DP), 2,4-D methyl ester and 2,4,6-trichlorophenol (2,4,6-TCP) were tested in various advanced oxidation studies.

Biography:

Dr. Peller completed her Ph. D. in Organic Chemistry from the University of Notre Dame in 2003. Her dissertation topic was *Hydroxyl Radical Mediated Transformations of the Herbicide 2,4-D and Related Compounds*. Her Master's degree in organic chemistry was completed in 1999 at University of Notre Dame. She obtained her Bachelor's degree in Science Education from Indiana University in 1986 with her major areas of study in chemistry and biology with a minor area in physical science. She has been teaching at Indiana University Northwest since 1987 with a leave for some of her time at the University of Notre Dame. She has taught many undergraduate courses at IU Northwest including General Chemistry lecture and discussion sections, General Chemistry and Biological/Organic Chemistry labs and Organic Chemistry lecture, labs and discussions sections. She has extensive experience in chemistry stockroom administration. Her laboratory manual, *Exploring Chemistry Laboratory Experiments in General, Organic and Biological Chemistry*, Prentice Hall, is in a second edition. She has five publications and has presented at professional meetings on her work. In her spare time she is a Church keyboardist, an Assistant High School cross-country coach, works with the Duneland Basketball Club as a Board Member, works in the area of Science Enrichment Work for schools and was a Boys Baseball and Girls Softball Coach.

RSVP: Deb McCarthy by 4 pm, Sept 15 via email (dmccarth@saintmarys.edu) preferably. Or leave a voice mail message 284 4660.

To reach the Dining Hall, park in the Science Hall Parking (entrance Douglas at Inn at Saint Mary's road) and after parking walk down the road along Science Hall and behind the Library. Proceed across the grass and walk behind the construction where the old Dining Hall once existed. Walk around the far end of the New Dining Hall to the front patio. A door will be open for you to enter into the West Dining Room. This route and the entrance will be clearly marked. Alternately you could park by the Dining Hall but then you would have to find you way back there in the dark from Science Hall.

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Minutes from the May Executive Meeting

St. Joseph Valley Section of the ACS,
Executive Committee Meeting
May 14th, 2003; 6:00 p.m.

Present: Chris Dunlap, Dan Brown, Doug McMillen, Pat Boettcher, and Rachele Yung

Treasurer's Report: Pat reported that we have \$9825.60 in the checking account. He also reported that ACS is now offering automatic deposit, and that we will do this.

The executive committee discussed placing some of the checking account money into Certificate of Deposits. We will discuss this further over email.

The minutes for the April 28th meeting were approved.

The next executive committee meeting will be arranged by email. The next Filter Paper deadline will be determined by the timing of the Mint Factory tour.

The Mint Factory tour is in planning. It will be the end of June or July.

We now have space on the ACS web server for our local section homepage. More information on the move will be forthcoming. Chris will serve as our Webmaster.

Andy Edelbrock is handling arrangements for the picnic in August. The preliminary announcement was in the last Filter paper.

Karen Morris has asked for support of the Expanding Your Horizons Program and Notre Dame. The Executive Committee approved \$105 for the purchase of Holographic pencils to be distributed.

There was a discussion of the status of our National Chemistry Week program.

The meeting was adjourned

Respectfully Submitted
Chris Dunlap

SJVASC New Website Location

The new Webmaster is Chris Dunlap and the local sections WebPage has been moved. It is up(dated) and running. Check out the new site at the following address.

<http://membership.acs.org/s/sjv>

If you have any suggestions and/or comments or would like to see about having any links or material added, contact Chris at (574) 284-4658 cdunlap@saintmarys.edu for consideration.



SJV-ACS Call for Nominations

The Local section is currently accepting nomination for several SJV-ACS Executive Council positions. If you would like to nominate yourself for any of the following positions, you must contact Bill Feighery at 237-4311 or wfeigher@iusb.edu no later than Sept 22 in order to have ballots ready and sent out by October 1st. The positions open are:

Chair-elect (three year commitment)

Secretary (one year appointment)

Treasurer (one year appointment)

Member-at-Large (one year appointment)

SJV-ACS Fall Speakers Lineup

OCTOBER DINNER MEETING

Speaker - Peter J. Reilly.

Date - Wednesday, October 22

Working in the Tropics on Food Problems

Abstract:

All of us in the temperate world use the agricultural products the tropical world sends us, but we think little of the processes that these products undergo before they reach us. This is perhaps a bit strange, as in most tropical countries the chief form of chemical processing is that conducted on agricultural materials, and these include such everyday items as coffee, tea, bananas, coconuts, sugar, and palm oil. Scientists knowledgeable in these areas can play a significant advising role in many third-world environments. Requirements in addition to knowledge of the subject matter are patience, cheerfulness, and an ability to communicate with others at their level. Events do not usually move at the pace those of us chained to a clock expect, but things get done anyway, often better than we do them. The payoff is the satisfaction gained from being able to function successfully in environments and cultures often very different from our own.

Biographical Information:

Peter J. Reilly, a New Jersey native, received an A.B. in chemistry in 1960 from Princeton University and a Ph.D. in chemical engineering in 1964 from the University of Pennsylvania. He spent four years with DuPont's Organic Chemicals Department in Deepwater, New Jersey; six years at the University of Nebraska-Lincoln; and since 1974 has been at Iowa State University, where he is a professor of chemical engineering and, since 1992, Anson Marston Distinguished Professor in Engineering. During the 1983-84 and 1992-93 academic years, he was an invited professor at the Swiss Federal Institute of Technology in Lausanne, Switzerland. Dr. Reilly's research interests are in the areas of enzyme and carbohydrate technology and utilization of agricultural byproducts, specifically in the enzymatic hydrolysis of starch and celluloses and in sugar chromatography. He coordinates Iowa State University's exchange programs with the University of Glasgow, Scotland, and with the University of Lausanne, Switzerland, and the Swiss Federal Institute of Technology in Lausanne.

NOVEMBER DINNER MEETING

Speaker - Dr. Dennis Jacobs

Date - Monday, November 10th

The November Meeting 's Abstract and Bio will to follow in the next Filterpaper. Mark your calendars early.



THE FILTERPAPER

Andy Edelbrock
Bayer Corporation
Elkhart, IN 46514

DON'T FORGET **RSVP Monday September 15th for the Dinner Meeting**
Mark your Calendars for October 22nd and November 10th

If you are receiving a paper copy of the filter paper send your Name
and E-mail address to Andy.Edelbrock.b@bayer.com



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St Joseph Valley ACS 4th Annual Picnic Recap

The weather was great this year for the **4th Annual SJV-ACS Picnic**. The turnout was around 30 people this year with several last minute cancellations and the food was terrific. The local section supplied Hamburgers, Veggie Burgers, Brats, Hotdogs, Chips , Pop and Beer. Curt Holmes and myself supplied the corn that was roasted to perfection and dipped in real butter. Many more delicious dishes to numerous to mention were supplied by other members. Horseshoes and Bocci ball were the games of choice this year although Doug McMillen and Dan Brown kept the younger kids out of breathe and moving with a cross between ghost in the graveyard, hide and seek and "Gottcha". Doug was actually observed hanging on to the shelter sign with his feet up in the air and dropping down on unsuspecting kids as they tried to find him. There was plenty to eat and drink and no fires were lit with flares this year. We are thinking of having the picnic next year a little later in the year and incorporating a hayride. If anybody has any other comments, suggestions or ideas, contact Andy Edelbrock at Andy.Edelbrock.b@bayer.com or 574-262-6967.