



May Dinner Meeting

Erwin Schrodinger: Path to the Invention of Wave Mechanics

Dr. Richard J. Field
University of Montana
Monday, May 3 2004

Dinner: Reggio's 1213 E Jefferson, Mishawaka (Between Fir and Cedar Streets) 255-0588
Menu: Italian Buffet (Baked Chicken, Meatballs, Lasagna, 5 types of salads, coffee, tea & spumoni ice cream)
Cost: \$15
Social Time: 5:30 p.m. (Indiana Time) (Cash Bar)
Dinner: 6:00 p.m.
Seminar: 7:00 p.m.

Abstract:

This talk is based on a superb recent biography of Erwin Schrodinger (Schrodinger, Life and Work, by Walter Moore, Cambridge University Press, Cambridge, 1989). The ancestry, childhood, early adulthood, and early scientific work of Erwin Schrodinger will be discussed. The development of quantum theory is qualitatively traced from Max Planck and black-body radiation to Einstein and Debye's low-temperature heat-capacity work, through Neils Bohr and the interpretation of atomic spectra, to Peter Debye's suggestions to Erwin Schrodinger that substitution of the DeBroglie wavelength into a standard wave equation might lead to interesting results. The extraordinary accomplishment of Erwin Schrodinger in a Swiss Alpine Gastehaus on Christmas break 1925, spent in the company an unknown woman, in making this simple suggestion into the most powerful and in some ways disturbing physical theory known to us is described. Erwin Schrodinger was one of the most influential thinkers of the 20th century. He was also one of this period's most interesting personalities, which also will be considered.

Biography:

Richard J. Field was born in Attleboro, MA. He received a B.S. degree from the University of Massachusetts-Amherst in 1963, an M.S. degree from the College of the Holy Cross in 1964, and a Ph.D. in physical chemistry from the University of Rhode Island in 1968. During 1968-74, he was a research associate with Richard M. Noyes at the University of Oregon (UO). He also was visiting assistant professor at UO (1970-73). During this time, he became interested in the Belousov-Zhasbotinsky reaction. This is the usually metal-ion-catalyzed oxidation of organic materials by BrO_3^- , during which the concentrations of catalyst and intermediate species oscillate in time as the overall reaction rushes toward equilibrium. Traveling waves of chemical activity (conceptually equivalent to nerve-impulse transmission and other biological processes occurring in excitable media) appear in the same system. After spending 1974-75 at the Carnegie-Mellon Radiation Laboratory, he joined the University of Montana, Department of Chemistry in 1975, where he is now professor and was chairman (1990-95). He served as visiting professor at the University of Notre Dame (1980) and at Universtat Wurzburg, Germany (1985-86), was a member of the Editorial Advisory Board of The Journal of Physical Chemistry (1989-95), and is currently a member of the Editorial Board of the International Journal of Chemical Kinetics.

RSVP: Dan Brown by Friday 4 pm, April 30th via email (Daniel.Brown.b@bayer.com) preferably.
Or leave a voice mail message 574-264-8747



ACS Anaheim Spring Councilor Report

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In an effort to help councilors better communicate the actions of council to their local sections, we have been provided with a summary of actions taken at the most recent meeting. I am herewith including an edited portion of that report which relates to actions of the council. My comments are in *red italics*.

The Committee on Nominations and Elections presented to Council the following nominees for selection as candidates for President-Elect, 2005: Edward M. Eyring, F. Sherwood Rowland, Gary B. Schuster and Isiah M. Warner. By written ballot the Council selected F. Sherwood Rowland and Isiah M. Warner as candidates for 2005 President-Elect. They join E. Ann Nalley, who was certified as a petition candidate for 2005 President-Elect. *FYI: Sherwood Rowland is THE Sherwood Rowland of Nobel Prize fame, and Isiah M. Warner has a strong reputation for mentoring students in chemistry, particularly disadvantaged students.*

As of March 30, the meeting had attracted 14,141 registrants as follows: Regular attendees, 7,595; Students, 3,801 (*17 of whom were from Saint Mary's College for whom the section provided some financial support*); Guests, 467; and Exhibitors, 2,278.

The Council VOTED to set the member dues for 2005 at the fully escalated rate of \$123.00. Each year the Council approves member dues as authorized in the Bylaws.

Membership in the American Chemical Society was 159,332 as of year-end 2003. This number represents a decline of 1% in the overall membership. However, the number of student members increased by 3.7% and the number of recent graduates increased by 50%.

The Council VOTED to formally dissolve, as of June 30, 2004, the probationary Division of Laboratory Automation. This action was taken at the request of the Division's leadership.

The Council received for consideration three petitions:

a) Petition for Electronic Balloting: *this would change the By-Laws to permit electronic balloting for any ACS elections, including those for national officers. Some concerns have been expressed about ensuring security and the possibility of disenfranchising many retired members who may not have computer access.*

b) Petition to Change Division Annual Report Deadline: *this would move the deadline for Divisional annual reports to the same dates required for Local Section annual reports.*

c) Petition for Membership Requirements for Teachers. *This would change the membership requirements for chemistry teachers making it possible for them to become members based upon experience instead of simply on the basis of educational training.*

Action is expected on these petitions at the 2004 fall national meeting in Philadelphia. *To say that we considered these is somewhat of a misnomer. Petitions like this appear in the agenda book and are discussed informally amongst councilors and more formally in District caucuses. They do not, however, come to the floor during the council meeting.*

A special discussion item was put on the Council agenda for this meeting. ACS President Charles Casey and Board Chair James Burke briefed the Council on the status of partnership efforts between the American Chemical Society and the American Institute of Chemical Engineers (AIChE) and noted the implication of these efforts for ACS. Councilors then participated in a discussion of this issue. Currently the ACS and the AIChE are pursuing a programmatic alliance that will more fully serve the needs of their members and the chemical enterprise, while enhancing both organizations' abilities to achieve their missions.

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Consideration also is being given to a membership alliance that could include expanded opportunities for members to participate more fully in both organizations. The discussion at Council revealed strong support for moving forward with these initiatives and identified key factors for consideration. *In the years I have been on Council, this is the first time that we have intentionally devoted almost 45 minutes of a meeting to a substantive discussion of an issue. It was a good discussion. You can read more about this issue in C&E News. I would appreciate any comments you might have as we prepare to move forward, or not, on this*

The following comments are some of my own additional observations.

President Charles Casey has made the recruitment of competent college faculty one of his high priority agenda items for this year. In that regard he has established the Academic Employment Initiative (AEI). In particular, at the Philadelphia meeting in the fall, there will be a poster session at which job seekers can present their research in an informal setting attended by those seeking to fill positions in their departments.

In an effort to communicate chemistry to the broader community, President Elect William Carroll is asking that four speakers be prepared at each site to give not only the technical talk to the local section, but to be available to give a short non-technical talk to high school and/or service club audiences.

I overheard many conversations at this meeting by people expressing concerns about global outsourcing of jobs for chemists. The Committee on Economic and Professional Affairs (CEPA) reported a current unemployment rate amongst chemists of 3.5% with a net decline of 93,000 more jobs in the last month. It was termed a "mega-trend of global outsourcing of technical jobs." Also in our agenda books was a draft of the new (7th ed.) of the ACS Professional Employment Guidelines. It has been unanimously approved by the Committee and by the ACS legal counsel. I can provide a copy to any interested parties.

Finally, I thought I had a reaction to the motel soap and/or laundry detergents. Turns out I came home with a nasty case of the shingles. I don't wish that on anyone -- but look, I'm a dedicated councilor. ☺

Sincerely,

J. Philip Bays

SJV-ACS Honors Local Science Olympiad Participants and Coaches

This year is the 36th International Chemistry Olympiad and the 21st year of U.S. participation in the Olympiad. This year's international event takes place in Kiel, Germany, July 18-27. Approximately 1000 students nationwide are selected to sit for the National Exam. Of the students who take the national exam, five will make the U.S. team.

John Koellner coordinated the local test, which selected eight students in our area to take the national exam at St. Mary's College on Friday, April 16. The Society awarded the students with molecular model kits for their achievement. Congratulations to students and teachers!

Student	High School	Teacher
Hannes Seuss	Lakeshore	Brian Samuel
Ken Kuo	St. Joseph	Brian Dolezal
Andika Suhardjo	St. Joseph	
Elizabeth Turner	Clay	Mary Short
Daniel Seitz	Clay	
Julio Noriega	Riley	John Koellner
Adam Boucher	Riley	
Benjamin Mechling	Elkhart Baptist	Walt Buckles



THE FILTERPAPER

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DON'T FORGET RSVP Thursday April 30th for the Dinner Meeting

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SJV-ACS Funds Undergraduate Paper Presentations at ACS Conference

The local SJV-ACS recently agreed to sponsor area students in presenting posters or papers at national ACS meetings. The following students were awarded approximately \$200 to help defray costs of presenting at the spring meeting in Anaheim. Congratulations to all.

Meeting	Candidate	Year	Meeting	Scope	Presentation
ACS 2004 Spring National	Cunningham, Stephanie		Nat'l	Poster	Research
ACS 2004 Spring National	Duff, Keiko	Sr.	Nat'l	Poster	Research
ACS 2004 Spring National	Blake, Meaghan	Sr.	Nat'l	Poster	Research
ACS 2004 Spring National	Dzudza, Alma	Sr.	Nat'l	Poster	Research
ACS 2004 Spring National	Kohl, Annette	Sr.	Nat'l	Poster	Research
ACS 2004 Spring National	Hardesty, Jessica		Nat'l	Poster	Affiliates

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