



# Double Bond

The newsletter of the Western New York Section of the American Chemical Society

Volume 78

March 2006

## UPCOMING EVENTS IN WESTERN NEW YORK

### EDUCATION NIGHT AWARD DINNER

The Western New York Section of the American Chemical Society will honor chemical educators and students at Education Night. Watch this space for the full announcement in the next issue of *Double Bond*. This event will take place in late April, early May, 2006.

### JACOB F. SCHOELLKOPF AWARD

Also keep an eye out for the upcoming announcement of the 2006 winner of the Jacob F. Schoellkopf Medal. The section will present this, the oldest local section award in the country, at the annual award dinner sometime in May. This year's medalist and details of the presentation dinner will be circulated in the next issue of *Double Bond*.

## IN THIS ISSUE

Check this issue for some of the events taking place around the ACS National Meeting in Atlanta this month. The Committee on Professional Training will host an open meeting on ACS guidelines for undergraduate chemistry programs, and the Younger Chemists Committee is sponsoring a 5K fun run/1.5 mi. walk. Details on p. 7.

There is also a new feature starting on p. 9 of this issue entitled "This Month in Western New York" highlighting the history and milieu of chemistry in Western New York as published in past editions of the newsletter. Here readers may find cautionary reminders or inspirational declarations of the power of chemistry as seen through the filter of time.

### FROM THE EDITOR

Greetings Western New York,

Thanks are in order to our local section councilors and executives for their work in restoring order and a comprehensive plan for the upcoming year of chemistry in the local section. We especially thank the new members who have come forward to take leadership roles. The updated executive committee listing is included on p. 10.

For my part, I will be finalizing the model for the email and web-based *Double Bond*. With this in mind, I want to reiterate that contributions to the newsletter are solicited from all chemistry people in Western New York. All material should be submitted by the first day of the month for inclusion in that month's issue of *Double Bond*. I will make every effort to send out each issue within the first 10 days of the month. If you have a time critical announcement, plan accordingly. Also understand that *Double Bond* will not be coming out every month from September to June as has been the tradition in the past. We hope to send it out at least 5 times a year to publicize upcoming events.

I am also pleased to welcome Alice Steltermann to chemistry as Assistant Editor of *Double Bond*. Through the Department of Chemistry and Biochemistry at Canisius College, Alice will also be a regular contact person for WNYACS affairs involving the newsletter, meetings, elections and other section business.

Thanks Alice!

Timothy Gregg  
Department of Chemistry/Biochemistry  
Canisius College  
Buffalo, NY 14208-1098  
(716) 888-2259  
greggt@canisius.edu

## A PREVIEW OF SOME EVENTS AT ACS ATLANTA 2006

**EVENT PLANNED FOR SENIOR CHEMISTS  
IN ATLANTA**

If you are a retired chemist and plan to be in Atlanta, GA for the March 26-31, 2006 ACS National Meeting, be sure to attend the Silver Circle & Retiree Breakfast on Tuesday, March 28, at the Marriott Marquis Hotel, Salon 1. The event is 7:30-9:00 a.m. and tickets can be purchased at registration. Program details will be announced in the Meeting Program. Ticket price is \$10.

**JOIN THE FUN RUN  
ACS NATIONAL MEETING**

If you plan to be at the ACS National Meeting in Atlanta, GA, please participate in the 5th annual Younger Chemists Committee Fun Run at Piedmont Park, 2 miles northeast of downtown Atlanta. Healthy scientists are happy scientists, so come and stretch your tired legs and join fellow chemists for the annual YCC 5K Run/1.5 Mile Walk. Bus transportation from the Georgia World Congress Center to the park will be available. Register by March 10 to take advantage of the early registration fee (\$25) and to receive a free T-shirt. After March 10, the registration fee is \$35. Registration forms and details are available at [acswebcontent.acs.org/nationalmeeting/atlanta2006/YCC\\_reg.pdf](http://acswebcontent.acs.org/nationalmeeting/atlanta2006/YCC_reg.pdf)

**REVISION OF GUIDELINES FOR ACS  
APPROVAL OF CHEMISTRY PROGRAMS**

**Looking for an opportunity to participate in discussions on the ACS Guidelines revision? You may do so during the extended CPT open meeting at the upcoming ACS National Meeting in Atlanta.**

The Committee on Professional Training (CPT) has begun a major effort to revise the ACS guidelines for approval of undergraduate chemistry programs. The Committee is seeking broad community input during the revision process. At the upcoming ACS National Meeting in Atlanta, the Committee will hold an extended open meeting for discussion related to the guidelines revision and encourages all concerned about the chemistry undergraduate education to attend. This meeting will take place on **Sunday, March 26, Noon – 2 PM** in the Westin Peachtree Hotel, International F/G. Light lunch will be served.

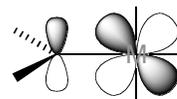
**CELEBRATING THE 2006 ACS NATIONAL  
AWARD RECIPIENTS**

On Tuesday, March 28th, fifty-six scientists will be honored with ACS Awards at the 231st National Meeting in Atlanta, Ga. It is part of the Society's mission to recognize the achievements of chemical scientists for their contributions to the varied fields of the chemical sciences and for representing the best in our field.

One of the highlights of the evening will be the presentation of the Priestley Medal – the Society's most prestigious award given to recognize distinguished services to chemistry – to Dr. Paul S. Anderson. Dr. Anderson is being recognized for his outstanding contributions to chemistry in service to society, his achievements in drug discovery, including anti-AIDS therapy as well as Zocor, Trusopt, and Aggrstat.

The fifty-six scientists who will be honored during the 2006 ceremony each serve as a reminder of the positive impact a single individual can make and of the great influence chemistry has on the world around us.

Tickets to the Awards Ceremony can be purchased when you register for the 231st National Meeting. For more information about the ACS awards, please visit <http://chemistry.org/awards>.

**IMPORTANT DATES TO NOTE FOR THE ACS  
SPRING NATIONAL MEETING**

Housing reservations and early registration are now open for the Spring ACS National Meeting to be held in Atlanta, Georgia, March 26 – 30, 2006. Take advantage of the lower rate for early meeting registrants.

The technical program went online January 30, the same day the *C&EN* Preliminary Program was published. Check the workshops, events, and special programs you want to attend and order tickets when you register for the meeting.

Visit [www.chemistry.org](http://www.chemistry.org) and click on national meetings in the left column. On the national meetings page, click on Atlanta Georgia meeting in the left column. All the information you will need to make the most of your national meeting experience is listed on this page. Don't miss out!

## CALL FOR WCC OVERCOMING CHALLENGES AWARD NOMINATIONS

The Overcoming Challenges Award (OCA) acknowledges the efforts of women and undergraduates who have overcome economic, personal, and/or academic hardships in pursuit of an education in the chemical sciences.

The award consists of a plaque, a \$250 honorarium, and \$1,000 for travel expenses to the fall ACS National Meeting where the award is presented. Award candidates must be women matriculating as an undergraduate chemical science major/minor in a two-year program or at a four-year school not granting a doctoral degree in chemical-related disciplines. Nominations are due May 1, 2006, and should be sent to: Women Chemists Committee, American Chemical Society, 1155 16th Street, N.W., Washington, DC 20036. For additional information, contact the WCC at [wcc@acs.org](mailto:wcc@acs.org) or visit <http://membership.acs.org/W/WCC>.

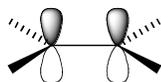


## THIS MONTH IN CHEMICAL HISTORY - #2

Harold Goldwhite, California State U., Los Angeles; Prepared for SCALACS, the Journal of the Southern California, Orange County, and San Gorgonio Sections of ACS.

In my last column I began to present a view of the chemistry of medical practice as presented in "The Elements of Medical Chemistry" by John Ayrton Paris M.D., F.R.S., F.L.S., Fellow of the Royal College of Physicians of London, published in New York in 1825. When this text was published Dalton's atomic theory, as first published by Thomas Thompson, was only a decade and a half old, and electrochemistry was only a decade older than that, but Paris, a really up-to-date author for his time, has much to say about both these concepts.

His chapter "On the Proportions in which Bodies Combine, and on the Atomic Theory" has sections on "the Daltonian doctrine, or atomic theory; On the weights of atoms; Chemical equivalents; Wollaston's logometric scale; Importance of the doctrine of definite proportion; and Practical application of the doctrine of equivalents." Of Dalton, Paris, quoting Thomas Thompson, says that he "deservedly enjoys the glory of having permanently established a theory...which...must be considered as the greatest step which Chemistry has yet made as a science." The explanation of the atomic theory which follows is clear and comprehensible – very much as you or I might give it before an elementary chemistry class – but it is noteworthy that Paris does not use the Daltonian symbols for the atoms of the elements, probably because his printer did not wish to make the expensive engravings that were required. Instead he uses abstract alphabetic letters like A and B in his numerical examples. He notes that the basis of the atomic weight scale differs with different chemists: "Mr. Dalton has made election of Hydrogen for this purpose because it is the lightest of all known bodies,...on the other hand, Wollaston, Thomson, and Berzelius, have assumed Oxygen, from its almost universal relations to chemical matter [i.e. many more elements form oxides than hydrides] as the decimal unit (the first making it 10, the second 1, and the third 100." Paris skips lightly over the question that vexed chemists for the next 40 years, that is how is one to assign formulas to molecules. Though we are 14 years after Avogadro's hypothesis it was not to make much of an impact on most chemists until after 1860. He simply points out that Davy has not accepted the Daltonian doctrine; that Dalton assumes water to be made up of one atom of hydrogen and one atom of oxygen (by his rule of simplicity); that Davy supposes that equal measures of different gases contain equal numbers of atoms, from which it is concluded that water



## CERTIFICATES FOR UNDERGRADUATES

The [ACS Committee on Professional Training](http://www.acs.org) (CPT), among many other activities in postsecondary education, administers the ACS approval process for undergraduate programs in chemistry. All graduates of an ACS-approved program who have completed the requirements for certification described in the ACS guidelines are certified annually to the Society by each program chair. Every certified graduate is eligible to receive a certificate from ACS that recognizes that the graduate has completed a bachelor's degree that meets the Society's criteria for professional education and membership. Faculty members and graduates can request certificates from the Office of Professional Training by sending an email to [cpt@acs.org](mailto:cpt@acs.org). Upon certification, every graduate is eligible for full membership in the ACS by applying online at the website: [www.chemistry.org/membership](http://www.chemistry.org/membership) or by contacting Debora Fillinich at [d\\_fillinich@acs.org](mailto:d_fillinich@acs.org) in the ACS Membership Activities Office.

contains two atoms of hydrogen to one of oxygen. And that: "It is, however, quite indifferent which we adopt, a very simple process reconciles them." [!]

Wollaston's logometric scale, referred to above, was an ingenious contrivance developed by that distinguished scientist (one of my favorites of the early nineteenth century) to facilitate quantitative calculations in analytical chemistry. It is a slide rule on which are marked the chemical equivalents of many reagents, both elements and compounds., It proved to be so useful that it was produced commercially and sold to chemists not only in Europe but also in the United States in the first decades of the nineteenth century.

Finally, in concluding my discussion of this most interesting volume, let me turn to the brief chapter on the then very new field of electrochemistry. After explaining the difference between static and galvanic electricity –or, as we might call it, voltaic electricity – Paris describes some fascinating experiments by Dr. W. Philip and other English physiologists in which the digestion of parsley by rabbits was found to be stimulated by the application of electric currents to certain stomach nerves. After describing a more practical battery than Volta's original pile, the author explains the laws of electrochemistry as deduced by Sir. H. Davy. The terms electro-negative and electro-positive, so familiar to all chemists these days, were still quite novel in 1825. Dr. Paris explains them clearly with reference to electrolysis experiments and even suggest the possibility of using electricity to dissolve calculi such as kidney- or gall-stones.

The study of old texts is recommended to all serious students of the history of chemistry. These books show the subjects and theories that were deemed of importance in their times, and give us a perspective on the chemists of former times that is hard to achieve even reading between the lines of histories of chemistry.   ψ



*The student dropped a bottle of  $KMnO_4$ , and, when asked what happened, could only reply, "I had an oxidant."*

## 60 YEARS AGO THIS MONTH IN WESTERN NEW YORK

**From *The NF=B Double Bond*, March 1946...**

The February meeting of the WNYACS was held Feb. 10 at Norton Hall, University of Buffalo... Mr. J. J. Davis, head of the department of Entomology of Purdue University, spoke on a most timely subject, "Chemistry and Pest Control".

The large audience was extremely interested in this less publicized work of the chemist...

...DDT has received more publicity and propaganda than any other material of similar use, and in a great many cases has been very badly misrepresented. DDT is a very excellent insecticide, is slow acting and has a long life. Its value cannot be over estimated when applied according to the established methods and for the established uses...

...Recently there have been a number of new insecticides developed, one of which is the gamma isomer of benzene hexi-chloride, which is five to ten times as toxic as DDT and is deadly to house flies and roaches. Practically speaking, its use will be very limited in this field due to the objectionable odor, and when sprayed on fruit a month before harvest a very objectionable taste can be detected in the fruit...

...A chlorinated hydro-carbon compound, known as "1068" (ed. note, chlordane), is another of the new insecticides and its effectiveness is between that of benzene hexi-chloride and DDT...

### Sentiments on science and peace:

"Where do we go from here?"...As science played so great a part in the war, so must we use science in peace...

...Science is the key to giving work to people, making jobs for the unemployed, and easing the work of the employed. Men that are employed in work that is suitable to them are happy men, and they in turn promote peace.

Let us, who are engaged in scientific and technical work, join hands with those who are working towards World unity, and work for the permanent peace among nations, and the comfort and enjoyment of man, without respect to nationality, race, or belief.

--W. B. F. Randolph

**WNYACS Officers & Staff****Chair**

David Hoth  
Honeywell  
(716) 827-6263 (w)  
[david.hoth@honeywell.com](mailto:david.hoth@honeywell.com)

**Chair Elect**

Diana S. Aga  
University at Buffalo, SUNY  
(716) 645-6800 ext. 2226 (w)  
[dianaaga@buffalo.edu](mailto:dianaaga@buffalo.edu)

**Vice-Chair**

Greg Shafer  
Honeywell  
(716) 827-6307 (w)  
[gregory.shafer@honeywell.com](mailto:gregory.shafer@honeywell.com)

**Secretary**

Mary O'Sullivan  
Canisius College  
(716) 888-2352 (w)  
[osulliv1@canisius.edu](mailto:osulliv1@canisius.edu)

**Treasurer**

Andrew Poss  
Honeywell  
(716) 827-6268 (w)  
[andrew.poss@honeywell.com](mailto:andrew.poss@honeywell.com)

**Councilor**

Peter Schaber  
Canisius College  
(716) 888-2351 (w)  
[schaber@canisius.edu](mailto:schaber@canisius.edu)

**Councilor**

David Nalewajek  
Honeywell  
(716) 827-6303 (w)  
[david.nalewajek@honeywell.com](mailto:david.nalewajek@honeywell.com)

**Double Bond Editor**

Timothy Gregg  
Canisius College  
(716) 888-2259 (w)  
[greggt@canisius.edu](mailto:greggt@canisius.edu)

**Schoellkopf Award**

Joanna Christopher  
West Valley Nuclear Services  
(716) 942-4189 (w)  
[joannachristopher@verizon.net](mailto:joannachristopher@verizon.net)

**Education Committee**

Ronald Spohn  
Praxair  
(716) 879-2251 (w)  
[ronald\\_spohn@praxair.com](mailto:ronald_spohn@praxair.com)

**Chemistry Olympiad**

Mariusz Kozik  
Canisius College  
(716) 888-2337 (w)  
[kozik@canisius.edu](mailto:kozik@canisius.edu)

**National Chemistry Week**

David Nalewajek  
Honeywell  
(716) 827-6303 (w)  
[david.nalewajek@honeywell.com](mailto:david.nalewajek@honeywell.com)

**Senior Chemists**

Joseph Bieron  
Canisius College  
(716) 888-2357 (w)  
[bieron@canisius.edu](mailto:bieron@canisius.edu)

**Member-at-Large South**

William Sullivan  
Praxair, Inc.  
(716) 879-7794 (w)  
[william\\_sullivan@praxair.com](mailto:william_sullivan@praxair.com)

**Member-at-Large North**

Robert Keem  
Invitrogen  
774 0204 (w)  
[robert.keem@invitrogen.com](mailto:robert.keem@invitrogen.com)

**Double Bond Assistant Editor**

Alice Steltermann  
Canisius College  
(716) 888-2340 (w)  
[stelterm@canisius.edu](mailto:stelterm@canisius.edu)

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