



# Double Bond

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

Volume 90

October 2018

## EMILY A. WEISS TO SPEAK AT CANISIUS COLLEGE

The Department of Chemistry and Biochemistry at Canisius College announces that Dr. Emily Weiss, Professor of Chemistry and Materials Science and Engineering at Northwestern University, will be presenting the 2018 Paul Gassman Memorial Seminar on Thursday, October 4 at 1:00 pm in the Montante Cultural Center. The title of the seminar is "Visible Light Photocatalysis with Colloidal Quantum Dots". Professor Weiss will also present a second seminar, entitled "Hierarchical Photocatalysis", at 3:30 pm in Horan-O'Donnell Room 107.

Professor Weiss is a leading researcher in understanding the mechanisms by which energy is converted from one form to another within inorganic nanostructures, and how organic molecules can be used to control which pathway a system takes. The model system that she uses most often in her research is a colloidal semiconductor nanocrystal, or quantum dot (QD). In addition, she has made major contributions to lowering the cost of solar energy by replacing inefficient crystalline silicon in photovoltaic cells with more efficient and less expensive mixed dimensional (MD) van der Waals (vdW) heterostructure materials.

*for more information, see page 3*

## WNYACS SLATE OF CANDIDATES FOR LOCAL SECTION OFFICES

The current slate of candidates for executive committee positions with terms beginning in January 2019 is listed here. Biographical sketches of the candidates follow.

<b>Chair</b>	Timothy Cook
<b>Chair-Elect</b>	G. Ekin Atilla-Gokcumen
<b>Vice-Chair</b>	Luis Velarde
<b>Secretary</b>	Christopher Patridge
<b>Councilor</b>	David Nalewajek
<b>Member-at-Large</b>	David Stewart

Information on voting will be sent by email.

## 2019 Candidate Biographies

### For Chair (2019):

**Timothy Cook** studied under John P. Caradonna at Boston University (B.A., 2005) and with Daniel G. Nocera at MIT (Ph.D., 2010). After two years of postdoctoral study in the Stang Group at the University of Utah, he joined the faculty as a research assistant professor investigating coordination-driven self-assembly for the construction of metallacycles and cages. In the fall of 2014, he established a group at the University at Buffalo, SUNY as an assistant professor of chemistry. His lab is currently exploring inorganic self-assembly with an emphasis on designing new molecules and materials for energy conversion, photochemistry, and host/guest chemistry.

### For Chair-Elect (2019):

**G. Ekin Atilla-Gokcumen** is the J. Solo Assistant Professor of Chemistry in the Department of Chemistry at UB. She received her Ph.D. from the University of Pennsylvania working with Eric Meggers. Dr. Atilla then did her postdoctoral studies with Riki Eggert at Harvard Medical School before joining the UB faculty in 2013. Her research aims to understand the role of lipids in cellular processes using a combination of chemical tools and chemical biology-based approaches. Ekin is an active participant of the WiSE initiative (Women in Science and Engineering) at UB where she mentors undergraduates on their career development goals.

### For Vice-Chair (2019):

#### **Luis Velarde**

Department of Chemistry, University at Buffalo

### For Secretary (2019-2020):

**Christopher Patridge** is an Assistant Professor of Chemistry at D'Youville College in Buffalo. His current focus has been developing his teaching skills in the courses aimed at students pursuing careers in the health professions. His research interests involve the synthesis and geometric and electronic characterization of novel-structured and/or low dimensional inorganic materials for electrochemical storage.

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Dr. Patridge received his B.A. from the University at Buffalo and completed his Ph.D. at UB with Sarbajit Banerjee. His thesis involved synchrotron work in absorption spectroscopy leading to a 2-year NRC postdoc with Karen Swider-Lyons in the Chemistry Division at the Naval Research Laboratory in Washington, DC. He moved back to Buffalo in 2013, with his wife and two children, to begin his academic career. The move was prompted by a desire to find a position that balanced the demands of teaching and research along with more personalized student/professor interaction that is not capable at larger institutions.

**For Councilor (2019-2021):**

**David Nalewajek** is currently a Research Fellow at Honeywell International. He received his B.S. in chemistry from Canisius College in 1974 and his Ph.D. from UB in 1978. His postdoctoral was spent at AT&T Bell Laboratories where he researched the design and synthesis of multidimensional superconductors. His current research interests are in the development of environmentally acceptable CFC replacements and fluorine based polymers for use in electronic and membrane separation technologies. He currently holds 87 U.S. Patents. Dave has been active in community outreach activities since 1980, serving as lecturer/demonstrator at the Buffalo Museum of Science and at local elementary schools. Within the WNYACS organization, he has held positions of member-at-large, vice-chair, chair-elect and chair. He has served as councilor for this Section since 1992. In addition, Dave has served three terms as chair of the Schoellkopf committee and was the recipient of the Schoellkopf award in 2003. In 2013, Dave was recognized as ACS Volunteer of the Year for the WNY Section. In 2015, he was elected as Fellow of the American Chemical Society for his work on CFC replacements and promotion of STEM initiatives in the WNY community. Dave also serves as chair for National Chemistry Week where he has served as chair/co-chair since its inception.

**For Member-at-Large (2018-2019):**

**David Stewart** grew up in Western New York and is happy he has been able to stay in Buffalo to teach general and analytical chemistry at D'Youville College. He attended Binghamton University, earning a B.S. in Biochemistry in 2005. After starting graduate school for a Master's in Education, he switched to the Chemistry Ph.D. program at the University at Buffalo. David worked under Diana Aga investigating methods for the identification and quantification of environmental contaminants using various mass spectrometry techniques and earned his Ph.D. in 2014. He continues to pursue research in the area of environmental chemistry with undergraduate students from D'Youville College. He has also helped small groups of high school students from Lewiston-Porter do research projects leading to presentations at International Super Science Fairs in Australia and Singapore.

## 80 YEARS AGO IN THE DOUBLE BOND

*The following excerpt appeared in the October, 1938 edition of the Double Bond*

### THE HYDRAULIC CANAL

Prior to the application of alternating current to power transmission in 1896, all mills using water power had to literally straddle their source of power. In Niagara Falls, the scheme of building a big canal to serve as a race way for a whole row of mills was conceived early in the century and construction actually started in 1853. The first water flowed through this "Hydraulic Canal" in 1857



The canal was completed in 1857, but for lack of customers, the water ran to waste over the cliff until 1875, when the Gaskill Flour Mill was built. We are indebted to Optometrist Willis E. Cushing for the accompanying picture of the cliff on the American side below the Falls, showing the Gaskill mill using a small amount of water and the balance of the water pounding the cliff below without being utilized. Note that only 26 ft. of head was utilized. This was because it was feared that the greater pressures that would develop in a deeper penstock would be too much for the type of construction available. Not only were the penstocks of wood, but even the gears transmitting the power were of maple, each separate tooth inset in such a way that when it was worn it could be replaced. Renewed piece by piece in this way, the Gaskill Mill, which was the first to be built in the Lower Milling District, survived until 1932. It was the last to be torn down when the Power Company cleared out the whole district.



The Department of Chemistry and Biochemistry at Canisius College  
presents 2018 Paul G. Gassman Memorial Seminar



## Emily A. Weiss, PhD

Professor of Materials Science  
and Engineering  
**Northwestern University**

Dow Chemical Company  
Research Professor



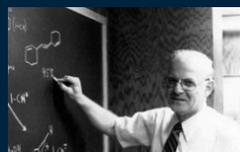
## “Visible Light Photocatalysis with Colloidal Quantum Dots”

# Thursday, October 4, 2018

1:00 PM | *Montante Cultural Center*

This event is free and open to the public. Reception to follow.

**Paul G. Gassman** graduated from Canisius College in 1957. He received a PhD in organic chemistry from Cornell University and later became the chairman of the Chemistry Department at the University of Minnesota. Paul G. Gassman was an internationally acclaimed organic chemist and also served as the president of the American Chemical Society. The Seminar Series is sponsored by the Gassman family in honor of the memory of Paul G. Gassman '57, PhD.



## COUNCILOR'S REPORT 256<sup>TH</sup> ACS NATIONAL MEETING

### Amendments to the ACS Bylaws

- A recommendation by the Committee on Membership Affairs that Council approve the Petition on International Chemical Sciences Chapters achieved the two-thirds majority required to amend Bylaw XI, Section 3 accordingly (additions **underlined**; deletions ~~struck through~~):

Affiliations of SOCIETY Local Sections or Divisions shall become effective upon authorization by their governing body, **approval by their respective Council committees governing Local Sections and Divisions**, and ~~by~~ confirmation by the Council Committee on Constitution and Bylaws acting for the Council, that the provisions of Section 1 of this Bylaw are met.

The changes will become effective upon confirmation by the Board of Directors.

- A recommendation by the Committee on Membership Affairs that Council approve the Petition on International Chemical Sciences Chapters achieved the two-thirds majority required to amend Bylaw IX, Section 4 accordingly (additions **underlined**; deletions ~~struck through~~):

An International Chemical Sciences Chapter ~~shall receive no allotment of funds from the SOCIETY and shall not be entitled to elected representation on the Council. A Chapter may assess its members local Chapter dues to be expended for its own purposes in harmony with the objects of the SOCIETY.~~

The changes will become effective upon confirmation by the Board of Directors.

- On the recommendation of the Committee on Committees, and the concurrence of the Council Policy Committee, Council approved the continuation of the Committee on Chemical Safety, subject to concurrence by the Board of Directors.

### Special Discussion

President Dorhout introduced and led a special discussion on what role(s) ACS should play in preventing sexual harassment in the sciences. He highlighted several recent articles, workshops and studies that have called attention to the issue, notably a symposium, "Science of Sexual Harassment" organized during the ACS National Meeting in New Orleans (Spring 2018) by the Women Chemists Committee and Chemical & Engineering News; and a National Academies of Sciences, Engineering, and Medicine consensus study report: "Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine" (2018). He directed Council's attention to existing ACS codes and initiatives to address sexual harassment, and offered items for discussion and possible action:

- More signs/information at National Meetings regarding our policies and supporting information
- Trained volunteers at national meetings for reporting sexual harassment

- A webinar on preventing sexual harassment for local sections or divisions

### Highlights from Committee Reports

#### *Nominations and Elections*

Ballots for the 2018 fall national election will be distributed October 1-3, with a voting deadline four weeks later, on October 31. ACS members eligible to vote and with an email address on file will receive an electronic ballot with the option to request a paper ballot. Those members with no email address on file will be sent a paper ballot but with the option to vote electronically. The ACS election vendor, Survey & Ballot Systems, will send three email reminders during the voting period to those who have not voted as of the reminder date.

#### *Budget and Finance*

The Society's 2018 Projection calls for a Net from Operations of \$31.8 million. This is \$1.3 million favorable to the Approved Budget. Total revenues are projected to be \$565.1 million, which is \$5.7 million or 1.0% favorable to the Budget. Total expenses are projected at \$553.3 million, which is \$4.4 million or 0.8% unfavorable to the Budget.

#### *Membership Affairs*

As of August 21, ACS had 149,584 members, which is a decline of only eight-tenths of one percent from the over 150,000 members in 2017. This year-to-date figure represents an increase of over 1,200 members when compared to the last two years. It was noted that five of last seven months have been respectively the best months for membership since at least 2014.

In light of the recent financial performance of the technical-meeting component of our national meetings, the Board voted to approve an advance member registration fee of **\$490** for national meetings held in 2019 (i.e., the current advance member registration fee escalated to account for inflation only).

#### *Boston Meeting Attendance*

The theme of the 256<sup>th</sup> ACS National Meeting was "Nanoscience, Nanotechnology, and Beyond." As of Tuesday evening, August 21, attendance was:

Attendees	8294
Students	3671
Exhibitors	1181
Expo only	576
<u>Guest</u>	<u>513</u>
<b>Total</b>	<b>14,235</b>

Anybody requiring additional info on any of these topics can contact me at [david.nalewajek@honeywell.com](mailto:david.nalewajek@honeywell.com)

Submitted by: Dave Nalewajek  
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