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# The Minnesota Chemist

Official Publication of the Minnesota Section of the American Chemical Society

Issue 3, May - June 2016

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## Update to Local Section Bylaws

At the April MN ACS Local Section meeting, a quorum of members in attendance voted unanimously to revise the Bylaws. This fall, watch your email for the NEW electronic ballots!

## May 16th: Awards Banquet

**Title:**

**Presenter:** Dr. David Tweeten

**Schedule:**

5 - 6 pm: Executive meeting

6 - 7 pm: Dinner

7 - 8 pm: Presentation

**Location:** Minnehaha Academy (Upper School), Campus Room, 3100 West River Parkway, Minneapolis 55406

**Check the MN ACS Section website for details.**

<http://mnacs.sites.acs.org/>

## June: Summer Social

Watch the MN ACS Section website for details.

<http://mnacs.sites.acs.org/>



## ACS Senior Chemists Lunch Meeting on May 18th

Lynn Hartshorn

The final Senior Chemists' Lunch of this season will be held on Wednesday, May 18th at 11:30 am at the Green Mill Restaurant on Hamline Avenue and Grand Avenue in St. Paul in their private room. Free parking is available in a small lot 50 yards west of the restaurant on the north side of Grand Avenue or on the street.

Our 20 minute talk will be given by Dr. Smarajit (Sam) Mitra, (formerly of 3M) who will give a shortened version of a talk he gave at the ACS meeting in San Diego, called "Gilbert Lewis and the Covalent Bond: Celebrating a Hundred Years."

We will also be discussing a possible summer activity, and suggestions for the fall lunches. You are welcome to bring a guest, and encourage other senior chemists you know to attend. The lunch is a self-paying lunch except for the speaker, who will get his/her lunch paid by ACS, and one free lunch will be given away by a drawing. Reservations are necessary, so RSVP to Lynn at lghartshorn@stthomas.edu by Monday May 16th at noon.

## ACS Young Chemist Meeting - June 14th

Arianna (Kooyman) Ahl

Casual Young Chemist Meeting (ages 35 and under)

Where: MN ACS Summer Social

When: June 14th, 6:00pm

Agenda: Meet other young chemists and discuss plans for Young Chemist group over dinner.

Contact Arianna (Kooyman) Ahl (amkooyman@gmail.com) with questions.



## Upcoming Chemists-in-the-Library Events

Philippe Buhlmann

May 28 at 1:30 PM – Oxboro Library

July 30 at 1:30 PM – Rice Street Library

August 27 at 1:30 PM – Golden Valley Library



## Councilors' Report on San Diego ACS Meeting March 13-17, 2016

Danae Quirk Dorr

The Minnesota ACS Section was represented by Councilors Marilyn Duerst, Lynn Hartshorn, Sarah Mullins, Danae Quirk Dorr, and Wayne Wolsey at the Council Meeting, as part of the 251st ACS National Meeting in San Diego, CA.

The Committee on Nominations and Elections presented to the Council nominees for selection as candidates for President-Elect, 2017. By electronic ballot, the Council selected **Peter K. Dorhout** and **Thomas R. Gilbert** as candidates for 2017 President-Elect. These two candidates, along with any candidates selected via petitions, will stand for election in the Fall National Election. Several individuals were named as candidates for Directors-at-large and District Directors. The District V (which includes the Minnesota Section) position will not be on the ballot this fall.

The Council voted to set the member dues for 2016 at the fully escalated rate of **\$166**. This rate is established pursuant to an inflation-adjustment formula in the ACS Constitution and Bylaws.

The Council approved the revised **Academic Professional Guidelines**. The guidelines apply to those members of the academic community whose job function impacts directly or indirectly on scientists practicing the profession of chemistry.

The ACS membership was nearly 157,000 as of December 31, which is 0.96% less than on the same date in 2014. The Society's overall retention rate is 84%.

As of Tuesday evening, March 15, the ACS spring national meeting had 16,327 registrants including 8398 regular attendees and 5979 students.

A special discussion on the Council agenda for this meeting centered on these questions: What factors determine the balance between supply and demand? What is the employment situation for technicians? What are benefits and handicaps of possible certification, licensing, and registration of chemical professionals? Do we prepare our graduates for jobs offered by industry? What causes young graduate and mid-career chemical professional unemployment, and how can we help? What is needed to increase underrepresented groups in the workforce? What global factors influence the US employment situation? What are the problems of outsourcing and immigration?

The Committee on Education announced that the beta version of ChemIDP, an individual development plan web tool for graduate students and postdoctoral scholars preparing to enter the workforce, was launched on September 30 at [www.chemidp.org](http://www.chemidp.org). Four key parts make up the ChemIDP platform: self-assessment, skill strengthening, career exploration, and goal setting. The use of IDPs by graduate students was recommended by the ACS Presidential Commission on Graduate Education in the Chemical Sciences.

## 2016 Report of MN ACS Co-Sponsorship of Winchell Undergraduate Research Symposium

Wayne C. Wolsey, Liaison between Minnesota Academy of Science and MN ACS

The Minnesota ACS Section was a co-sponsor, with the Minnesota Academy of Science (MAS) of the Winchell Undergraduate Science Symposium held on the campus of the University of Minnesota (Coffman Union) on April 29, 2016. The ACS Section paid the registration fee of \$1800 (including a \$300 co-sponsorship fee) for 20 chemistry/biochemistry undergraduates who displayed posters or made oral presentations.

All presentations were judged by a set of MAS-selected judges, and the following chemistry/biochemistry presentations were judged as particularly outstanding. James Wollack was involved in picking the presentations for recognition by the MN ACS Section.

### Lee I. Smith Award for Excellence in Chemistry

Evan Kalb and Thomas Marsh (Advisor), *Study of Fluorescent Ligand Interactions on Supramolecular g-DNA*, University of St. Thomas

### Outstanding Poster Presentations

Meaghan Bruening and Daron Janzen (Advisor), *Palladium(II) Thiocrown and Oxathiocrown Complexes with Cyclometallating Ligands*, St. Catherine University

Hailey Karlovich, Kyle Springer, Nicole Grabow, and Deanna O'Donnell (Advisor), *Analysis of X-ray Fluorescence Spectroscopy on Fort Union Glass Trade Beads*, Hamline University

Keagan Anderson and Thomas Nalli (Advisor), *SNAR Polymerization and Hydration of Poly (oxy-1,4-phenyleneethynyl-1,4-phenylene)*, Winona State University

#### **Best of Session Oral Presentations**

Dionte Emerson and Heather Sklenicka (Advisor), *Aroma Molecules and Secondary Experimentation*, Rochester Community and Technical College

#### **Five Best Oral Presentations**

Francesca Ippoliti and Lisa Prevetie (Advisor), *Synthesis and Characterization of Three Oleoyl-PEG Orthoester Micelles for Drug Delivery*, University of St. Thomas

#### **Special MN ACS Awards**

Evan Kalb, Meaghan Bruening, Hailey Karlovich, and Keagan Anderson (above) each received a \$25 gift certificate from the MN ACS Section for special distinction in their chemical research investigations.

#### **Tri-Beta Award**

The Beta-Beta-Beta Biology Honor Society recognized for special merit the following project: Jenny Koops and Jeff Port (Advisor), *The Effects of Clay Filters on Arsenic Levels in Drinking Water in Rural Cambodia*, Bethel University

## **2016 Regional Science Fair Recipients of MN ACS Special Awards**

Wayne C. Wolsey, Liaison between Minnesota Academy of Science and MN ACS

The following high school students received a Special Award of \$50 from the Minnesota ACS Section at Regional Science Fairs (those within the MN Section boundaries), sponsored by the Minnesota Academy of Science in February, 2016.

#### **Mankato Regional Fair**

Rohan Patel, "Which Types of Fruit Peels Lower the Oxidation of Oil the Best?" Mayo High School, Rochester

#### **Rochester Regional Fair**

Alex Alexander, "The Impact of Anti-Oxidants on *Drosophila Melanogaster*," Mayo High School, Rochester

#### **St. Cloud Regional Fair**

Nathan Olson, "Frost Dissolving Solutions," Blaine High School, Ham Lake

#### **Twin Cities Regional Fair**

Anvi Jain, "An Eco-friendly Approach for Removal of Toxic Pentavalent Arsenic from *Dryza sativa* (Rice)," Eden Prairie High School, Eden Prairie

Thank you to those ACS members who judged at these Science Fairs (all within the boundaries of the Minnesota ACS Section), especially Danae Quirk Dorr at the Mankato Regional Fair and Diane Amell, James Wollack, and Wayne Wolsey at the Twin Cities Regional Fair.

## State Science Fair ACS Awards

Submitted by Lynn Hartshorn and Wayne Wolsey

The State Science Fair was held at the Doubletree Hotel in Bloomington on Monday April 4th. A team of Minnesota section members consisting of Wayne Wolsey (leader), Diane Amell, Lynn Hartshorn, Arianna Kooyman and Todd Williams collectively judged projects. There were 44 middle school projects in the categories "Biochemistry", "Chemistry," and "Energy: Chemical" and 15 high school projects in the same categories.

**The Middle School Award (\$50)** was presented to:

Claire Dwyer, of Highland Park Middle School, St. Paul, for her project "How Different Fuels Affect Energy Release in Combustion."

**Honorable mentions** were given to:

Max Vogel, from Oakland Junior High, Oakland, for his project "Got Gas V2: A Follow-up Investigation into the Efficiency of Ethanol"

Anna Schmidt and Lily Osmond, from Highland Park Middle School, St Paul, for their project: "Apple Browning: A Study in Enzymatic Browning"

Cyemone Nusser and Mariah Kreykes, from Loyola Catholic School, Mankato, for their project: "Bismuth: Does Temperature Change alter Crystal Formation inside Geodes"

**The Senior High School Award (\$100)** was presented to:

Justin Franz, from Cotter High School, Winona, for his project "A Refined Process for Synthesis and Examination of the Photoelectrical Properties of Nanoparticles"

**Honorable mentions** were given to:

Rohan Patel, from Mayo High School, Rochester, for his project "How to Make Your Frying Oil More Reusable"

Austin Weatherhead, from Winona High School, Winona, for his project, "Silver (Ag) Nanoparticles Exploited as a Colorimetric Detection Apparatus for Heavy Metal Ions (Cu, Cd, Pb)"

Arush Jain, from Eden Prairie High School, Eden Prairie, for his project "Energy Density and Commercial Viability Assessment of Solid Waste to Biofuel Generation Using Pyrolysis. Year II"

All Honorable mention awardees will receive a one-year subscription to the ACS publication *ChemMatters*.

Congratulations to these students and to the many other students who presented excellent projects!

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If you have content for The Minnesota Chemist, please send it to Becky Guza, Editor ([becky.guza@hbfuller.com](mailto:becky.guza@hbfuller.com))

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