

# The Minnesota Chemist

Official Publication of the Minnesota Section of the American Chemical Society

Issue 1, Jan - Feb 2017



## Greetings from the Chair

I hope all are staying warm during our arctic blast.

My main goal for the year, besides finding exciting speakers, is to stimulate more involvement in the local section. I encourage individual comments, but will be looking to get representative groups to help move this agenda. So the young chemists, women chemists, senior chemists, minority chemists, industrial chemists, academic chemists, high school chemists, etc. all have goals and needs that are of particular interest that may not be well understood by the other groups. I would like to see some of these groups find a speaker that represents their interests to share with the section at our monthly meeting. This way all of us can become more educated about the entire chemistry community and have a broader view of our profession.

One group that we seem to lack is an organized women's chemist group. I encourage those with an interest to help structure such a group that can provide mentoring and activities that will encourage broader participation of women in the local section. Perhaps modeled on the senior chemists group which has regular meetings and presentations, but also considering outreach to undergraduate and graduate students, starting industrial and academic chemists, and any other women that are not represented and may need mentoring as well. I would encourage this group to also find a speaker during the year that could inspire and educate. Funding for activities is available locally, but also nationally.

I am challenging everyone to think about making our chemistry community stronger and more inviting to a broad range of chemists. Sure it is challenging, but we need a more involved group and this will only happen if we try new things that give more people a reason to be involved.

Stay warm and do good chemistry!

Nick Schlotter  
[nschlotter@hamline.edu](mailto:nschlotter@hamline.edu)



## 2017 MN ACS Officer Election Results

Election results are in!

**Chair Elect:** Arianna Ahl

**Treasurer:** Bruce Bear

**Councilors (2017 - 2019):** Lynn Hartshorn, James Wollack

**Alternate Councilors (2017 - 2019):** Danae Quirk-Dorr, Mike Wentzel

**Nominations Committee, Industry:** Kimberly Herzog

**Nominations Committee, Small School:** Rita Majerle

**Nominations Committee, University of Minnesota:** Sudheer Chava

Thank you to everyone who participated!



## January 17 Meeting

**Title:** The Sea Lamprey Migratory Pheromone Story: A 400 Million Year Old (and Ongoing) Saga

**Speaker:** Thomas R. Hoyer, Professor, Department of Chemistry, University of Minnesota

**Location:** University of St. Thomas, [Binz Dining Room](#)

There is free parking on Goodrich Avenue along the edge of campus and on the south side of Summit along the edge of campus. (The north side is permit only.) There is also paid parking at \$1/hour in the Anderson parking ramp (#71 on the campus map.)

**Time:** 5 pm - Executive Meeting; 6 pm - Dinner; 7 pm - Presentation

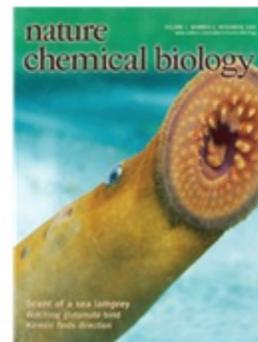
**Cost:** \$20 member / \$5 student

**Menu:** Pasta buffet with coffee and light dessert

**Meal Ticket:** Go to the "[Web Store](#)" link on the [MN ACS](#) page to purchase meal reservations through PayPal.

**Deadline:** January 10th, 2017

**Abstract:** The sea lamprey is an ancient vertebrate - one of the oldest - with a fascinating history. The chapter covering the last century reveals its decimating effect on the fisheries of the Great Lakes, where it thrives as an **invasive pest**. Current sea lamprey control programs there rely heavily on the use of a larvicide (TFM). Various multidisciplinary, collaborative studies between researchers in my laboratory and those of Professors Peter Sorensen<sup>1-3</sup> (Department of Fisheries, Wildlife, and Conservation Biology; University of Minnesota) and, more recently, Weiming Li<sup>4-5</sup> (Department of Fisheries and Wildlife and the Department of Physiology; Michigan State University) have led to the discovery of various chemical compounds that are emitted by larvae and elicit olfactory responses in adults. Some induce conspecific behavioral activity, marking them as components of lamprey pheromones. It is alluring to consider the possibility of using migratory pheromones for the development of alternative and environmentally benign lamprey control strategies. Aspects of the biology and chemistry that drive these sorts of studies will be presented.



### References

1. "Mixture of new sulfated steroids functions as a migratory pheromone in the sea lamprey," Sorensen, P. W.; Fine, J. M.; Dvornikovs, V.; Jeffrey, C. S.; Shao, F.; Wang, J.; Vrieze, L. A.; Anderson, K. R.; Hoyer, T. R. *Nature Chemical Biology* **2005**, *1*, 324-328
2. "Details of the structure determination of the sulfated steroids PSDS and PADS—new components of the sea lamprey (*Petromyzon marinus*) migratory pheromone," Hoyer, T. R.; Dvornikovs, V.; Fine, J. M.; Anderson, K. R.; Jeffrey, C. S.; Muddiman, D. C.; Shao, F.; Sorensen, P. W.; Wang, J. *J. Org. Chem.* **2007**, *72*, 7544-7550.
3. "Discovery and development of a pheromone for use in an integrated pest management scheme for invasive sea lamprey, *Petromyzon marinus*," Sorensen, P. W.; Hoyer, T. R. *J. Fish Biol.* **2007**, *71*, 100-114.
4. "(+)- and (-)-Petromyroxols: Antipodal tetrahydrofuranediols from larval sea lamprey (*Petromyzon marinus* L.) that elicit enantioselective olfactory responses. Li, K.; Huertas,

M.; Brant, C.; Chung-Davidson, Y-W.; Bussy, U; Hoye, T. R.; Li, W. *Org. Lett.* 2015, 17, 286–289.

5. "iso-Petromyroxols: Novel dihydroxylated tetrahydrofuran enantiomers from sea lamprey (*Petromyzon marinus*)," Li, K.; Brant, C.; Bussy, U.; Pinnamaneni, H.; Patel, H.; Hoye, T. R.; Li, W. *Molecules* **2015**, 20, 5215–5222.

**Speaker Bio:** Thomas R. Hoye attended Bucknell University where research experiences in heterocyclic chemistry in the laboratories of Professor Harold W. Heine convinced him to lay aside study of chemical engineering to concentrate on organic chemistry. He completed the B.S./M.S. degrees in 1972 and proceeded to graduate studies in the laboratory of Professor Robert B. Woodward at Harvard University, earning the Ph.D. degree in 1976. That fall he joined the faculty in the Department of Chemistry at the University of Minnesota, where he has spent his independent career leading a research program in synthetic and mechanistic organic and polymer chemistries.

## February 6 Meeting



**Title:** How to Feel as Bright and Capable as They Think You Are!

**Speaker:** Valerie Young, Ed.D., Dreamer in Residence at ChangingCourse.com.

**Location:** [Hamline University](#), 1536 Hewitt Ave, St. Paul, MN 55104. Closest parking is in Anderson Center (pay) and on Englewood Ave (free).

Business meeting – Anderson 304  
Social – Anderson 304  
Dinner – Anderson 304  
Presentation – Drew Science Center, room 118

**Time:** 5 pm - Business Meeting; 6 pm - Social & Dinner; 7:30 pm - Presentation

**Cost:** \$20 member / \$5 student

**Menu:** Dinner will be buffet, entrees: Flank Steak with a cider/dijon marinade, asiago and red pepper crusted chicken breast, and five spice salmon filet. Plenty of gluten free options.

**Meal Ticket:** Go to the "[Web Store](#)" link on the [MN ACS](#) page to purchase meal reservations through PayPal.

**Deadline:** January 30, 2016

**Abstract:** Why do capable people suffer from the impostor syndrome and how can you thrive in spite of it. Do you chalk your accomplishments as a fluke or "no big deal? Do you think, "If I can do it, anyone can"? Do you feel like you're just fooling your professors? If so, join the club! Millions of people around the world — from executives to college students and professors to Academy award winners— **secretly worry they're not as bright and capable as other people "think" they are.** It's called the Impostor Syndrome and there is a cure. Join us for an energetic workshop led by speaker and author, Dr. Valerie Young.

**Speaker Bio:** Dr. Valerie Young earned her doctoral degree from the University of Massachusetts in Amherst where she was also the founding coordinator of the Social Justice Education program. Dr. Valerie Young is an internationally-known speaker, a leading expert on the impostor syndrome, and author of award-winning book *The Secret Thoughts of Successful Women: Why Capable People Suffer from the Impostor Syndrome and How to Thrive in Spite of It*. Her career-related tips have been cited in these and dozens of other business and popular publications around the world. In addition Valerie has been interviewed on countless national and local radio programs in the US and Canada and on WPIX Channel 11 news in New York and Yahoo. A former manager of strategic marketing at a Fortune 200 company herself, Dr. Valerie Young has shared her highly relatable and practical advice to tens of thousands of executives, managers, and professionals at these and many other companies in the United States, Canada, and Europe. In addition to her work on impostors syndrome Valerie is widely recognized as a thought-leader on thinking outside the job box. Since 1995 she has been the founder and Dreamer in Residence at ChangingCourse.com — an online resource for people who want to make a living doing what they love... without a job. Over 24,000 people

subscribe to the Changing Course Newsletter. And Valerie is the creator of the first and only training program that teaches people how to serve the career change needs of people who want to do their own thing. To date, over 350 people from 19 countries have trained with Valerie to become licensed [Profiting from Your Passions® coaches](#).



## Winchell Undergraduate Science Research Symposium at Macalester April 22

Wayne Wolsey, Macalester College ([wolsey@macalester.edu](mailto:wolsey@macalester.edu))

The annual Winchell Undergraduate Research Symposium, of which MN ACS is a co-sponsor, will be held at Macalester College on Saturday, April 22, 2017. This event, which is part of the Annual Meeting of the Minnesota Academy of Science, will feature undergraduates in Chemistry/Biochemistry making poster or oral presentations. Keynote speaker, Professor Mary Montgomery (Macalester, Biology) will speak on Gene Editing. MN ACS budgets funds to cover the registration costs for undergraduate presenters in the two categories. A letter will be sent to the Chairs of the Departments giving full information. For information on registration and the required abstracts, go to: [www.mnmas.org](http://www.mnmas.org). Questions can be directed to Jennifer Schuetz, Meeting Manager, at 612-440-7670 or [jenniferschuetz@mmas.org](mailto:jenniferschuetz@mmas.org).



## January Senior Chemists' Meeting on January 18th

Lynn Hartshorn

The Senior Chemists group will meet on **Wednesday, January 18<sup>th</sup>**. We will meet on the campus of the University of St. Thomas. Please park in the Anderson Ramp (take I-94 to the Cretin exit, go south on Cretin, cross Summit Avenue and then turn right at the junction of Cretin and Grand Avenue. The Anderson Parking Ramp is right there about 50 yards from the intersection).

We will meet at **"The View" at the Anderson student Center** for lunch, a short walk away. Meet at 11:15 at the entrance to "The View" which is on the top floor of the Anderson Student Center (see campus maps, this is the large building across Cretin Avenue and North of Summit). Cross Cretin at the lights. There is an elevator in the Center. The View has one entry charge, about \$9, and a self-service choice of salads, burgers, entrees, desserts, soup, etc. The food is very good.

### January Senior Chemists' Tour

After lunch we will walk back over to the campus where you parked in the Anderson Ramp, and go into **the Owens Science Center** which is opposite the parking ramp. We will meet on the first floor right by the entrance closest to the Anderson Parking Ramp. One of my colleagues in the Chemistry department is arranging a short introduction to some of the undergraduate research that takes place, and he and his students will briefly talk to you and give you a tour of the research labs. This will take about one hour.

If you do not wish to come to lunch then please meet us in Owens Science Hall by the entrance mentioned above at 12:45 pm.

Please make a reservation since I need to tell my colleague how many will be coming and numbers are limited. RSVP to Lynn Hartshorn at [lghartshorn@stthomas.edu](mailto:lghartshorn@stthomas.edu) by Friday, January 13<sup>th</sup>. Thanks and a happy New Year!



## Call for Nominations – 2017 Minnesota Award of the Minnesota Section American Chemical Society

Ramesh Kumar

Quality, excellence, innovation, leadership, commitment – colleagues who embody these traits may be outstanding candidates for the Minnesota Award. Please consider nominating a worthy section member to this prestigious award. Previous winners have included Izaak Kolthoff, Robert Brasted, Paul Gassman, Edward Leete, Wayland Noland and Donald Truhlar (University of Minnesota), Courtland Agre (Augsburg College), John Wilson (Economics

Laboratory), Frank Bovey, Julianne Prager, Don Hagen, Richard Newmark, Andrew Ouder Kirk (3M), George Moore (3M) and Tom Hoye (University of Minnesota)

The Minnesota award was established in 1958 to honor section members who have made an outstanding contribution in chemical research or in service to the profession. The winner receives a bronze plaque and \$500 cash award and presents an award address to the section (usually in May). The award is given every three years, rotating with the Brasted Award for Excellence in College Teaching and the Award for Excellence in High School Teaching.

The nomination procedure is simple – submit a nominating letter, copy of curriculum, vitae or resume of the nominee, and up to four supporting letters to the chair of the Awards Committee, Ramesh C. Kumar, at [rckumar0051@mmm.com](mailto:rckumar0051@mmm.com). The nomination package should emphasize the nominee's achievements. The deadline for completed nomination packets is March 15, 2017.

## Call for Nominations – 2017 The Lyle Hall Senior Chemist Award

Ramesh Kumar

The Lyle Hall Senior Chemist Award is based upon post-retirement professional activities of a member of the Minnesota ACS Section who has entered into formal retirement from his/her primary job. Professional activities can include volunteer ACS service, volunteer activities in any other scientific organization such as the Minnesota Academy of Science (i.e. Science Fair Judging), professional writing, consulting, and/or research. Nominations (including no more than 2 seconding letters) should be sent to Ramesh C. Kumar. [rckumar0051@mmm.com](mailto:rckumar0051@mmm.com). A CV is useful. The Awards Committee may also select an award recipient, based upon their collective knowledge of the activities of an individual. The deadline for completed nomination is March 15, 2017.

## Call for Nominations – 2017 Janet Tarino Volunteer Award

Ramesh Kumar

The Janet Tarino Volunteer Award will be given to an individual for outstanding volunteer service to Minnesota ACS, and/or chemistry related projects and events not directly connected to Minnesota ACS. This person will have demonstrated an exceptional passion for and commitment to community outreach, and dedication to projecting a positive image of chemists.

Nominating documents should include curriculum vitae and examples of volunteer service. The award consists of a plaque which will be presented at the May 2017 meeting of the section.

Nominations should be submitted electronically to the Chair of MN ACS Awards Committee, Ramesh C. Kumar ([rckumar0051@mmm.com](mailto:rckumar0051@mmm.com)) before or on March 15, 2017.



## 5th Annual MN ACS Chemistry Career Fair

James Wollack

The 5<sup>th</sup> annual MN ACS Chemistry Career Fair was held on Tuesday, November 14<sup>th</sup> at St. Catherine University in St. Paul, MN. St. Catherine University donated space for this event and the section only had to pick up charges for event set up and food costs. These costs were offset by contributions from the following event sponsors: H.B. Fuller, Verum Staffing, Pace Analytical, Tru Vue, Lab Support, Aspen Research, and the Minnesota High Tech Association. The section would like to thank these companies and organizations for their contributions. They help make this this annual event possible after seed funding from the National ACS was used to fund the event in its early years.

The event was a success. Over 100 scientists attended the fair to meet with representatives from nearly twenty different companies, graduate programs, and organizations. Attendees included students from over fifteen different colleges and universities as well as scientists looking for new career opportunities. Amy Lindgren from Prototype Career Service capped the even with a seminar on job search strategies. If your company is interested in being represented at next year's fair please contact James Wollack at [jwollack@stkate.edu](mailto:jwollack@stkate.edu).

Thank you to Career Fair Sponsors:



## Report: Senior Chemists Grant

Lynn Hartshorn, Minnesota Section Senior Group coordinator

Lynn Hartshorn of the Minnesota Section of the ACS obtained a Senior Chemists' Committee grant of \$500 in 2016. This was used to increase membership of the local Senior Chemist group, and also to enhance their meetings, in the following ways.

### 1. Small projector purchased

The group holds lunch meetings in a St Paul restaurant that is conveniently located and inexpensive, but has no projection facilities. We often have "Short Talks" at the lunches. These are 20-minute talks on scientific topics. Speakers were unable to show images on a screen and had to use handouts. Lynn Hartshorn purchased an Optima S321 DLP projector. This was used successfully with a black sheet attached to the wall. The cost of the projector and associated cables was \$289.00

### 2. Free Lunch.

The grant was also used to fund the major part of an inexpensive pre-holiday free pizza and salad lunch at the same restaurant on November 16<sup>th</sup> 2016. It is well known that the offer of free food usually causes an increase in attendance and this occurred. The attendance increased from the usual average of about 20 seniors to 28 at this lunch, of whom several were first time attendees. Our hope is that seniors will now continue to attend the lunches, even if they are no longer free. The total cost was \$375.62. The Minnesota section supplied the extra funding of about \$160.

### 3. Survey

Lynn Hartshorn took advantage of the larger attendance at the free lunch to survey the seniors present. She had prepared a written survey that she handed out. This asked the Seniors for their opinions about future senior group meetings. Many good ideas were obtained that included ideas for future "Short Talks", suggested tours and discussions about books about science.



## Minnesota's STEM Internship Gem

Becky Siekmeier

[SciTechsperience](#) is a **free**, statewide, state-funded internship program designed to build and retain Minnesota's STEM workforce, support small business, and help students get hands-on industry experience. SciTechsperience connects small Minnesota companies with college STEM majors and provides a **wage reimbursement of 50% of the intern's wages** (up to \$2,500). At least 270 wage matches are available in 2016-2017 on a first-come, first-hire basis.

**Benefits:**

For students: A one-stop shop for **paid STEM internships** in Minnesota ([flyer](#))

For employers ([flyer](#)):

- 50% wage reimbursement (\$2,500 max)
- Large pool of **pre-screened candidates** and the flexibility to refer candidates to the pool
- Employers make the hiring decision

Full eligibility requirements are available at [SciTechMN.org](#).

Here's an example of a biotechnology internship: [SciTechsperience Interns hope to change lives at Ativa Medical](#)

Enroll today at [SciTechMN.org](#). Questions? Contact Becky Siekmeier at [beckys@mht.org](mailto:beckys@mht.org) or [952-230-4241](tel:952-230-4241).



**Volunteer  
Opportunities**

## Upcoming Chemists-in-the-Library Events

Philippe Buhlmann

January 21 at 1:30 PM – Brooklyn Park Library

February 11 at 1:30 PM – St. Louis Park Library

March 11 at 1:30 PM – Rondo

April 8 at 1:30 PM – Hamline Midway

## Young Chemist Committee

Arianna Ahl

The Minnesota ACS is looking for a new Chair of the Young Chemist Committee (ages 18-34).

Engage Young Chemists. Network. Resume Build. Advance through the ACS.

For more information contact Nick Schlotter ([nschlotter@hamline.edu](mailto:nschlotter@hamline.edu)) or Arianna Ahl ([amkooyman@gmail.com](mailto:amkooyman@gmail.com)).

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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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