New Haven Section
American Chemical Society
Newsletter

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New Haven Section Chartered in 1912
www.newhaven.sites.acs.org

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Message from the Chair
As you can see by reading this newsletter, 2017-2018 was a very active year! The highlights were our evening guest lecture events (September-November and March-June). These events are mostly attended by a core 20-30 members who faithfully attend – thank you!

More on numbers and their demographics. Most of these active members come from a later in life profile member – i.e., they are at the longer wavelength end of our membership spectrum! This year I am hoping to attract members from other parts of our membership spectrum. One demographic group I hope to see attend our meetings are High School Chemistry Teachers – you will find that our guest speakers provide a
lot of relevant information that can be useful in your classroom teaching.

Please email me (fgasparro@hamdenhall.org) if you are interested in joining a committee to explore the ways the local section can be even more helpful for you! I hope to see you at one of our upcoming Fall meetings (see schedule of speakers and their topics elsewhere in this newsletter).

Enjoy the remaining days of your summer!

Frank Gasparro, PhD  
Chair

Executive Board Elections  
The following positions are up for election in November: Chair-Elect, Councilor, Alternate Councilor. If you are interested in running for one of these positions please contact Frank Gasparro, Chair. fotondoc@aol.com

The NCW kickoff event for the weeklong celebration with be a showing of “The Martian”, starring Matt Damon. The film will be shown at Hamden Hall Country Day School in Hamden on Friday, October 19 at 7 pm in the Hamden Hall theater. The event is Free with an RSVP. The showing is open to members and the public, but RSVP is required (call (203) 752-2616 to reserve your spot!).

We have scheduled these events:  
walk-up activity tables, museum talks and experiments, a school science night, hands-on children’s classes, a movie showing, and chemistry magic shows

at these locations:  
public libraries in Hamden, North Haven, Cheshire, New Haven, Guilford, and Milford; Hamden Hall Country Day School, Bishop Woods Architecture and Design Magnet School; and The Eli Whitney Museum and Workshop.

How can you help?  
We’re happy for volunteers to help with events.

Please contact Jane Snell Copes, who is coordinating events for the section at profsepoc@scienceoutsidethebox.com or phone 651-357-3316.

New Haven ACS members participate in Whitneyville Fall Festival  
Saturday September 15th 10 AM to 5 PM Whitney Avenue at Putnam Avenue in Hamden

Join your colleagues at a booth with Chemistry activities and handouts to publicize National Chemistry Week. Bring yourselves, your parents, your students, your children, and your neighbors. We will have plenty of science fun, good food, and fabulous music. Easy bus access.

If you’d like to volunteer to lead an activity for a couple of hours, please contact Jane Snell.
Celebrating Chemistry Magazine for grades 4-6

New Haven Section will have copies of this resource featuring this year’s National Chemistry Week theme, Chemistry is Out of this World. It’s available in both English and Spanish, and you can pick up copies to take to an elementary school or a youth group by contacting Jane Snell Copes, Email: profsepoc@scienceoutsidethebox.com or phone 651-357-3316. Let her know soon how many copies you can deliver and in which language.

ACS has digital downloads available for this year’s Celebrating Chemistry (as well as several past year’s versions) in English and Spanish.

For ACS members (you may need to log in with your ACS member ID Number)

https://www.acs.org/content/acs/en/education/outreach/celebrating-chemistry-editions.html

Scheduled Meetings for Fall 2018:  SAVE the DATES!!

September, Wed. the 12th at Brazi’s Restaurant in New Haven- Patent Law, “Protecting your Invention: A Patent Primer”, Dr. Dennis Jakiela a former NH ACS Chair.

October, Wed. the 10th at Eli’s on Whitney-Ms. Michelle Lu, Gold Medal winner at the 50th International Chemistry Olympiad. Competition, “Experiencing an International Chemistry Competition”.

November, Wed. the 14th at Eli’s on Whitney- Professor William Jorgensen, Yale University Chemistry Department, “Computers in Drug Discovery”

The Connecticut Valley Section is planning its 2nd Annual Symposium on Applied Synthesis for Friday September 21st, 2018 at Connecticut College, New London, CT. (see pg 14)

2018 Local Section Meetings Report
Ana Newton, Chair-Elect

To kick off the Spring General Meetings the Section met at Eli’s on Whitney restaurant in Hamden in March. Professor William Stigliani discussed changes in the environmental chemistry of soils and sediments that can inadvertently mobilize pollutants to create surprising and unexpected toxification events in the Long Island Sound.

Dr. William Stigliani speaking to New Haven ACS members in March.

On April 11 at Brazi's Italian Restaurant in New Haven our 2nd General Meeting was held. Ms. Nicole Langlois, an Undergraduate Student from the University of New Haven and New Haven ACS’s 2017 Undergraduate
Research Award recipient, discussed her lab’s progress towards the synthesis of Cadiolides. Nicole is a chemistry major working in Professor Pier Cirrilo's lab.

Nicole Langlois (right) receiving a certificate for being our New Haven ACS Undergraduate Research Award winner from our Chair-Elect Ana Newton.

At our 3rd Spring General Meeting we honored milestone members (50 plus years) and Chemistry Olympiad participants (pages 3& 4).

50 + Year Membership Certificate Presentations.

Every spring the Section honors those who have held membership with the American Chemical Society for 50, 60 and recently even 70 years. At our May meeting four of these long-term members came to receive their longevity certificates. It was exciting to have 4 times as many guests show up to be honored as usually attend! Those members are pictured below being honored by our Chair, Frank Gasparro.

Our May General Meeting is about to start.

An “unidentified” 50 year member.

Dr Leonard Corwin (right) accepting his certificate from our Chair, Frank Gasparro.
Our speaker at the May meeting, **Dr. Jane Snell Copes** from “Science Outside the Box” spoke to us about “Fun Science”. Yes, it was a fun presentation. Dr. Copes has taken the reins of National Chemistry Week organizing for the Section and has planned some great activities for the Fall in New Haven County (see page 8).

**Check out our website!**

[http://newhaven.sites.acs.org/](http://newhaven.sites.acs.org/)

**The 2018 U.S. National Chemistry Olympiad**

Olivier Nicaise, Alternate Councilor

**A Golden Year for the Chemistry Olympiad Program in New Haven County: Michelle Lu, a Pomperaug High School Gold Medalist at the 50th International Chemistry Olympiad.**

“Happy late Summer” to all of you, fans of the Chemistry Olympiad program, and welcome to the 2018 Chemistry Olympiad report!

I am sure that you all remember my –usual!– untempered enthusiasm earlier this year at the announcement of the 2018 U.S. National Chemistry Olympiad (USNCO) competition:
“It is 2018, an Olympic year, but also the 50th Year Anniversary of the International Chemistry Olympiad, so, one more reason for the ACS New Haven Local Section USNCO competition to be back, and looking forward to much excitement and success as in the past years!”

As a matter of fact, following an already quite successful Chemistry Olympiad campaign last year which not only saw Ms Michelle Lu (Pomperaug HS) receive High Honors for her performance on the USNCO National Exam (along with 3 other students receiving Honors for their performance in that same competition), but also attend the USNCO study camp to compete for a spot on the U.S. team, this year’s competition has been one for the books for the New Haven County high school chemistry students, equaling the 2008, 2010, and 2012 vintages, with one of their peers, Ms Michelle Lu, traveling to the International Chemistry Olympiad as a member of Team USA, and bringing back the gold! So, at the outset of this report, please let me shout an immensely deserved “Bravo” to those 2018 brilliant competitors, and pass on my Congratulations to Michelle!

And now, just a little bit of a reminder: the Chemistry Olympiad program is a competition designed to stimulate interest and promote achievement in high school chemistry, and, ultimately, it brings together the world’s most talented high school students to test their knowledge and skills in chemistry. This program also provides recognition of outstanding young chemistry students, teachers, and schools. Nations around the world implement their own selection process to identify the most high-performing students who will then compete at the International Chemistry Olympiad (IChO). The selection process in the U.S., aka the USNCO competition, consists of a multi-tiered competition; generally, it first involves a local competition, aka the Local Exam, and it is then followed by the U.S. National Chemistry Olympiad competition, aka the USNCO National Exam, both competitions being sponsored by the American Chemical Society (ACS), and administered by its local sections. The top 20 students at the USNCO National Exam are then invited to attend a 2-week study camp, and 4 students, along with 2 alternates, end up being chosen to represent the United States at the International Chemistry Olympiad competition which typically takes place in July, and in a different country each year (next year’s IChO competition will take place in Paris, France).

As mentioned at the outset of this report, the ACS New Haven Local Section participated once again this year in the USNCO competition, and Dr. Olivier Nicaise, thanks to the invaluable—and limitless—help of Professor Kent Marshall (Quinnipiac University), coordinated the first two installments of this competition that was hosted by the Department of Chemistry and Physical Sciences at Quinnipiac University, and consisting of the Local Exam and the National Exam (vide supra). In this regard, it should be mentioned that this year’s competition was returning to Quinnipiac University for the seventh year in a row—Happy 7th Year Anniversary!—thanks in great part to Professors Carol Fenn and Kent Marshall, and also to the Quinnipiac University administration. On this note, the ACS New Haven Local Section would like to reiterate how grateful it is to Quinnipiac University for its continued association with the Local Section regarding the organization of the USNCO competition.

One of the highest numbers of students ever in New Haven County (134 students), representing 17 high schools, first participated in the Local Exam competition that was administered on March 15 and March 17, 2018. It was very satisfying to see returning to the competition a couple of schools who had been absent from it for the past few years, and just as satisfying to also welcome a new participating school. A group of 11 students, representing 8 high schools, was then selected to compete at the
**USNCO National Exam** that was given on **April 21, 2018** (the nominee allotment of 10 students for the USNCO National Exam is communicated by the ACS National Office, and is dictated by the number of registered New Haven Local Section members; as a consequence of having attended last year’s USNCO study camp, **Ms Michelle Lu** was invited to compete at the National Exam, and became the 11th contestant). The students who competed at the USNCO National Exam this year were:

<table>
<thead>
<tr>
<th>Name</th>
<th>School</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michelle Lu</td>
<td>Pomperaug High School, Southbury Class of 2020</td>
<td>Mrs. Coleen Merritt</td>
</tr>
<tr>
<td>Prastik Mohanraj</td>
<td>Engineering &amp; Science University Magnet School West Haven Class of 2019</td>
<td>Mr. Brian MacWilliam</td>
</tr>
<tr>
<td>Hyunseo (Ariel) Kim</td>
<td>Choate Rosemary Hall, Wallingford Class of 2020</td>
<td>Ms. Jan Cook</td>
</tr>
<tr>
<td>Ayan Bhattacharjee</td>
<td>Cheshire High School, Cheshire Class of 2019</td>
<td>Dr. Stephanie Bertenshaw</td>
</tr>
<tr>
<td>Se Ri Lee</td>
<td>Choate Rosemary Hall, Wallingford</td>
<td>Ms. Jan Cook</td>
</tr>
<tr>
<td>Anthony Yang</td>
<td>North Haven High School, North Haven Class of 2018</td>
<td>Mrs. Juliet Nichols</td>
</tr>
<tr>
<td>Ethan Silver</td>
<td>Hopkins School, New Haven Class of 2019</td>
<td>Mrs. Sarah Leite</td>
</tr>
<tr>
<td>Yasin Tarabar</td>
<td>Cheshire High School, Cheshire Class of 2019</td>
<td>Dr. Stephanie Bertenshaw</td>
</tr>
<tr>
<td>Sumedha Chowdhury</td>
<td>West Haven High School, West Haven Class of 2018</td>
<td>Mrs. Joanne Poffenberger</td>
</tr>
<tr>
<td>Eric Yeh</td>
<td>Oxford High School, Oxford Class of 2018</td>
<td>Mrs. Sue Blozzon</td>
</tr>
<tr>
<td>Liam Gerety</td>
<td>Oxford High School, Oxford Class of 2018</td>
<td>Mrs. Sue Blozzon</td>
</tr>
</tbody>
</table>

These 11 students were honored for their outstanding achievements in high school chemistry on May 23, 2018, at an award ceremony organized by the New Haven Local Section, and held at Eli’s on Whitney, in Hamden. Each of them received a Chemistry Book recognition pin, and also a USNCO National Exam Participation Certificate. With a limit set by the USNCO National Office of no more than two students per high school who can sit on the USNCO National Exam as a way to promote widespread participation of the various high schools within a given local section, and also, but to a lesser extent, for reasons of non-U.S. citizenship or non-U.S. residency, a very few of the top 10 scoring students at the Local Exam were unfortunately not allowed to compete in the USNCO National Exam, and that is the reason why the New Haven Local Section has always wanted to recognize all top 10 scoring students at the Local Exam, regardless of their participation, or not, in the USNCO National Exam. This year, at the award ceremony, each of the following 13 students was therefore presented with a $75 gift certificate for their outstanding achievement at the 2018 U.S. National Chemistry Olympiad, with 11 of them having competed in the USNCO National Exam (vide supra): Michelle Lu (Pomperaug HS), Prastik Mohanraj (Engineering & Science University Magnet School), Hyunseo (Ariel) Kim (Choate Rosemary Hall), Ayan Bhattacharjee (Cheshire HS), Se Ri Lee (Choate Rosemary Hall), Kathy Lee (Choate Rosemary Hall), JeeHwan Kim (Choate Rosemary Hall), Anthony Yang (North Haven HS), Yasin Tarabar (Cheshire HS), Ethan Silver (Hopkins School), Sumedha Chowdhury (West Haven HS), Eric Yeah (Oxford HS), and Liam Gerety (Oxford HS).

Nearly 17,000 high school students across the country were engaged in an array of activities and examinations at the school-system level (the Local Exam), vying for a chance to compete in the USNCO National Exam, and in April, nearly 1,000 students participated nationwide in the USNCO National Exam in the hope of being invited to attend the 2-week USNCO study camp. Whereas the format of the local competition (the Local Exam) leading to the selection of the nominees for the National Exam is left to the discretion of the ACS Local Sections, the format of the National Exam is set by the USNCO National Office, and consists of a three-part, ca. 5-hour competition that includes two written exams (a 60, single-answer, multiple-choice question exam covering broad chemistry topics, and an 8, problem-solving, explanations question exam requiring in-depth knowledge of chemistry theories and models), and one laboratory practical. This year, we proudly report that Miss Michelle Lu (Pomperaug HS) received –once again!– High Honors for her performance on the USNCO National Exam, as a consequence of being among the top 50 students, and that Mr. Prastik Mohanraj (Engineering & Science University Magnet School) and Miss Hyunseo (Ariel) Kim (Choate Rosemary Hall) received Honors for their performance in that same competition, as a consequence of being among the top 51-144 students; what an
accomplishment by those talented students! And also once again, Ms Michelle Lu finished among the top 20 students out of that group of 50 students, therefore being—once again!—one of 20 finalists invited to attend the 2-week intensive USNCO study camp in order to compete for a spot on the U.S. team at the 50th International Chemistry Olympiad. The study camp was held at the U.S. Air Force Academy in Colorado Springs, CO, on June 10-25, 2018. Under the tutelage of three mentors, students receive at the study camp college-level training, with an emphasis on organic chemistry, through a series of lectures, problem-solving exercises, lab work, and testing. Mentors play a vital role in preparing the nation’s brightest high school students to compete in the International Chemistry Olympiad. They guide the top 20 students through a series of practice problems, testing student skills, and ultimately selecting the U.S. team for the International competition. During the camp, mentors and students become a family unit. All participants live in the same dorm facility, eat all meals together, and share bathrooms and telephones. At the conclusion, based on performance, four students are chosen to represent the United States at the International Chemistry Olympiad with teams from over 70 other countries. Each country sends four contestants and a couple of coaches/mentors to the host country for seven to 10 days of exams, lectures, recreation, and tours. The composition of the United States Chemistry Olympiad team was announced at the conclusion of the study camp on June 25, 2018, …and the U.S. Alpha Lambda Team included Ms Michelle Lu; “The second time is the charm”!

The U.S. Alpha Lambda Team left a couple of weeks later to compete at the 50th International Chemistry Olympiad, which began this year on July 19 in Bratislava, Slovakia and concluded on July 29 in Prague, Czech Republic. It was reported that the U.S. team turned in a top performance for the second year in a row, with the 4 high school students scoring 4 gold medals for the second time in team’s history, …and, in particular, with Ms Michelle Lu winning the 10th highest-ranking gold medal! “I think we all realized at the same time, and it was just a big shock,” said Michelle of learning about her team’s accomplishments. “We were all just very very excited at that moment.” Michelle said that the theoretical and practical exams “touched on a lot of interesting topics that I think a lot of us had never thought about before, like DNA equilibrium. It was quite interesting to work through.” The U.S. team competed against 296 students from 76 countries, with a total of 35 gold medals, 65 silver medals, and 95 bronze medals being awarded. Congratulations Team USA— and Michelle!—for this extraordinary achievement! Ms Michelle Lu’s outstanding performance at this year’s Chemistry Olympiad competition, especially with having been a Team USA — gold!– medalist at the International Chemistry Olympiad, perpetuates a tradition of excellence among New Haven County high school students established several years ago by Ms. Jenny Lu—yes indeed, Michelle’s older sister!—, a bronze medalist at the 2008 IChO (Budapest, Hungary), and then extended in the following years by Mr.
Alexander Siegenfeld, a gold medalist at the 2010 IChO (Tokyo, Japan), and Mr. James Deng, a silver medalist at the 2012 IChO (Washington, D.C., USA).

The “Golden U.S. Alpha Lambda Team”: Andrew Wu (from left), Yutong Dai, Michelle Lu, and Jeffrey Shi celebrate their gold-medal wins.

Needless to say, we are so very proud of the record of academic achievement that those high school students in New Haven County have displayed in this year’s Chemistry Olympiad competition – another Hurrah to Ms. Michelle Lu! –, and with such interest in participating in the Chemistry Olympiad program, we are looking forward to many more successes of this nature in the years to come! And last, but not least, CONGRATULATIONS to all of the New Haven Section Chemistry Olympiad competitors who have graduated from high school this year, we will miss you, and good luck to you all! And to all the other ones who are returning to school, we wish you a fantastic new school year, and look forward to seeing you again in 2019 for the 51st edition of the Chemistry Olympiad competition!

The lunchtime gave attendees a chance to network with each other, as well as time to interact with the authors of the 13 posters that were presented.

3rd Annual New Haven New Haven ACS Student Research Symposium
Jim Kirby, Site Chair, SRS

The Third Annual Student Research Symposium was held on Saturday, April 28, 2018 at the North Haven Campus of Quinnipiac University. The event was very successful. It was well attended and there was significant interaction between participants. The Section appreciates the corporate sponsors that donated to the event: Gaussian Corporation and Cantor-Colburn. Gaussian has supported each of our 3 symposium most generously. Cantor-Colburn is a new supporter this year. Thank you!

The Symposium opened with a scientific talk by a prominent New Haven Scientist. This year that Keynote Address was presented by Dr. Vincent T. Breslin, professor of Environmental Education and Marine Science at SCSU. Dr. Breslin’s talk was entitled, “Factors Controlling the Distribution of Contaminant Metals in Connecticut Coastal Harbors.”

Program cover for the Student Research Symposium 2018.
The Best Oral Presentation was given by Stefanie Kickinger from Yale University, entitled “Elucidating the Molecular Determinants for the Subtype-Selectivity of Betaine/GABA Transporter 1 (BGT1) Inhibitors.” The Best Poster Presentation was given by Brandon Miller of the University of New Haven. It was entitled “Studies Toward the Total Synthesis of Spiromastixzone J.” Many thanks to all of the volunteer judges who helped determine our winners!

Registrants for the Student Research Symposium numbered 60 in all. There were attendees from 5 each of the colleges located in the New Haven area. For the first time there were guests from Albertus Magnus College. We are currently looking for a volunteer site organizer for next year’s symposium.

Dr. Vince Breslin, SCSU, 2018 Student Research Symposium keynote speaker detailing his research on the distribution of metals in sediment in the Long Island Sound.

After the Keynote and a short break, the Student Oral Presentations commenced. Site organizer Jim Kirby secured the venue at Quinnipiac University’s North Campus which was perfect for our event. Both the auditorium where the 4 oral presentations were held and the room which housed the poster session and the lunch were well suited for our event. Quinnipiac food services provided lunch for attendees. After lunch, the Student Poster Session was held, followed by the Awards Ceremony.

Judge Dennis Jakieka (left) congratulating to Mr. Brandon Miller from University of New Haven as 1st Place Poster Award winner.

Chair-Elect Dr. Ana Newton congratulates Ms. Stefanie Kickinger for Best Oral Presentation.
New Haven Science Fair 2018

The New Haven Public Schools Science Fair Program has several components all aimed at improving the quality of science and math education in the New Haven public schools. The students conduct projects during the year and the culmination of the program is the actual science fair where the students preK-grade 12, present posters describing their projects including their results and conclusions. The program is administered by the Greater New Haven Chamber of Commerce. In previous years the Fair was held at Yale Commons. However, this year the Commons has been undergoing renovations so the Fair was held at the Floyd Little Athletic Center located at Hillhouse High School.

In addition to the numerous judging categories and criteria assigned by the Fair administrators there are also Special Awards given by volunteer sponsors such as ACS, the CT Agricultural Experiment Station, the American Society of Metals and many others. For these Special Awards the sponsors judge based on their own criteria. For the first time representatives of the sponsors were invited to attend a reception for the science mentors which was held at the Leitner Family Observatory and Planetarium on Prospect Street in New Haven. I attended the reception, explored the facility and heard an interesting presentation about the fair. The Fair ran from Monday May 14th to Wednesday May 16th. All the judges reviewed the posters on Monday from 4-8 PM in

The winning preK-8 poster was prepared by 7th graders Eris Darouk and Destiny Tomes from Bishop Woods School who studied the formation of Bismuth Crystals.

absence of students and on Tuesday from 11 AM-1 PM in the presence of students. At that time the judges discussed the projects with the students attempting to learn how much of the project came from student input and how much was understood by the students. After the students left, the judges met and determined the prize winners.

The Chamber of Commerce does an excellent job of making the judges feel welcome, even in a new facility. Not only was a buffet dinner provided at the athletic center on Monday evening, a buffet breakfast and buffet lunch were also available there. Furthermore free
parking was available on both days and parking passes were not required.

After notifying the Program Consultant for the Fair that ACS would again be a sponsor, my next task was to obtain ACS members. The response to my call was excellent, and the following members served with me as judges: **Chris Zuzi, Bob Davis and Raj Bandaranayake.** After the winners were announced, I purchased the prizes (Visa gift cards) and gave them in marked, sealed envelopes to the Program Consultant for presentation at the Science Fair Awards Ceremony held this year at Hillhouse High School on May 16.

The New Haven Section awards two prizes of $100 each: one for the best project from grades preK-8 and one for the best project from grades 9-12. Unfortunately, the science projects are listed by the Fair organizers in just two major categories: physical science and biological science. Thus we had to first identify and list the projects containing chemistry and then decide on the best projects on our own list.

For grades preK-8, the winning poster was prepared by 7th graders **Eris Daraouk and Destiny Tomes** from Bishop Woods School who studied the formation of Bismuth Crystals. As summarized by **Chris Zusi:** "The purpose of the experiment was to examine the effect of varying the cooling rate of molten bismuth on the crystal structure (notable since the crystals are known to grow faster at the outside edges rather than the inside edges of nascent crystals). A constant amount of elemental bismuth was melted on a stove, transferred to a tin container, covered, and incubated at either room temperature or refrigerator temperature. The samples (run in triplicate) were retrieved after a set duration and the remaining molten bismuth was poured off. The residual crystals were weighed. The slower-cooling, room temperature samples produced 2-3 times the mass of crystals compared to the refrigerated samples."

For grades 9-12 the winning poster was prepared by **Prastik Mohanraj,** a senior from the Engineering and Science University Magnet School. As summarized by **Bob Davis:** "Chemically altered usnic acid derivatives were prepared in an effort to enhance tumoricidal properties. Cytochrome P450, an active enzyme of hepatocellular carcinoma, was targeted by synthesis of analogs of disrupted aromaticity or enhanced electron deficiency in the aromatic ring of usnic acid." A photo of the poster is shown below.

![Winning research project documented on a poster created by Prastik Mohanraj's, an Engineering and Science University Magnet School senior.](image)

The New Haven ACS Section's May meeting is usually held around the time of the Science Fair. This year the May meeting was held after the Fair and the 7th graders were able to attend with their teacher. The students had a great time participating in the hands-on part of the speaker's presentation.
Symposium on Applied Synthesis Planned by the CT Valley Section

The Connecticut Valley Section is planning its 2nd Annual Symposium on Applied Synthesis for **Friday September 21st, 2018** at **Connecticut College, New London, CT.**

Registration is now open. Poster presentations on any topic in Organic chemistry are welcome and encouraged. [http://cvs-acs/sites.acs.org/](http://cvs-acs/sites.acs.org/)

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