Mid-Hudson Chemist

ACS Local Section
Mid-Hudson

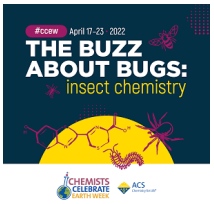
Spring 2022

SAVE THE DATE

URS takes place is on April 29, 2022 at Mount Saint Mary College

Please see details see page 7

Celebrate as Chemists Celebrate Earth Week
April 17-23 2022
Topic: Insect Chemistry



Thank our 50 year, 60 year and 70 year ACS members who are being honored at our URS for their years of dedication and service

Upcoming Events

63nd Annual Dutchess County Regional Science Fair
Date: Saturday, April 2, 2022
Place: Dutchess Community College
Pendell Road, Poughkeepsie NY
Time: 9:30 am – 12:30 pm

ACS Earth Day Hike
Date: Saturday April 23, 2022
Place:Appalachian Trail Head near Nuclear Lake
Time: 2 p.m.(See page 3 for details)

22nd Annual Mid-Hudson ACS Undergraduate Research Symposium
Date: Tuesday, April 29
Place: Mount Saint Mary College
Newburgh, NY
Poster Session A: 4-4:30 B: 4:40-5:20pm
Guest Speaker: Dr. Daryl Boyd
Lecture Time: 6:00pm
Topic: Fabrication of High Refractive Index Infrared Transmitting Organically Modified Chalcogenide (ORMOCHALC) Polymers

ACS Northeast Regional Meeting (NERM 2022)
Date: October 2-October 5
www.Nerm2022.org for more information.
(See page 6 for details)

2022 Executive Committee

Chair: Chi Nguyen; **Chair-Elect:** Michelle Rissolo; **Past Chair:** Lori Wojciechowicz; **Treasurer:** Joan Skinner; **Secretary:** Ken McDonald; **Councilor:** Lynn Robinson; **Alternate Councilor:** Maryellen Sinclair; **Members–at–Large:** Ines E. Augie, Dawn Riegner, and Joseph Tanski; **NCW Co-Chairs:** (see ad below); **Publicity:** Maryellen Sinclair; **Awards Chair:** Patti Cusatis and Lynn Maelia; **WCC Chair:** Lynn Robinson; **YCC Chair**:TBA; **SCC Chair:** Glenn Roy **Webmaster**: Patti Cusatis; **Membership Chair:** Maryellen Sinclair ***Mid-Hudson Chemist* Editor/Publisher:** Maryellen Sinclair

We Are Looking For A Young Chemist Committee Chair for the 2022-2023 term

Contact Information

Mid-Hudson ACS Website: www.midhudsonacs.org
Please visit our site and contact our Webmasters (patti.cusatis@basf.com) with your comments or additional items to be posted.

~Join the Mid-Hudson ACS Discussion List~
The following website may be used to subscribe, unsubscribe, or view the archive:

lists.msmc.edu/mailman/listinfo/acs-mh
To post a message to all the list members, send email to acs-mh@lists.msmc.edu.

Like us on Facebook: www.facebook.com/MidHudsonACS

Hudson Valley Science Café

A Science Café is a monthly gathering in a café, pub or restaurant, open to the public, with a short presentation of a topic followed by discussion. The essence of a Science Café is informality, with groups seated around tables with food and drink to encourage conversation.

Hudson Valley Science Cafe will be taking its usual winter break from December to March.
Meetings to be announced starting in April!

Website: www.cafescientifique.org/index.php?option=com_content&view=article&id=196:hudson-valley&catid=78:cafe-pages

Hudson Valley Science Café has received start-up funds from WGBH-NOVA and the American Chemical Society.

Please contact Dr. Toby Rossman (tobyrossman@yahoo.com) for more information

Hudson Valley Science Café is on Facebook: www.facebook.com/hudsonvalleysciencecafe

October 16-22 2022
Topic: Fabrics
Theme: Fabulous Fibers: The Chemistry of Fabrics

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Mid Hudson ACS Earth Day Event: Outdoor Science, history, walking-hiking event. You may even call it an interactive science experiment.

The walk-hike is suitable for families and people of various abilities.

No dogs please.

There are two options to participate,

- option #1, a short walk (~40 min and <2 mile) on even surfaces, or
- option #2, a longer hike of 4.5 miles around the lake.

This event is limited to 25 participants. If you plan on participating, please indicate your intent using the following form.

55 Acres of Nuclear Lake located in Pawling New York

The History of the Lake: Nuclear Lake, a pristine 55 acre lake located in Pawling NY. Unfortunately this now serene setting has a dark past. It was the former site of United Energies, Nuclear Energy Research Laboratories from 1958-1972. In 1972 there was a laboratory glove box accident which resulted in an explosion which fatally injured the scientist working in the glove box and also released an unknown quantity of radioactive material (maybe Uranium and Plutonium). The US government spent 33 million dollars remediating this area to its natural state and it is now owned by the National Parks Service. and holds a portion of the Appalachian trail.

The Experiment: The hypothesis is that there still might be measurable levels of background radiation present at the site of the old R&D labs. So lets take a walk in with a Geiger counter and measure the radiation level along the way.

Original R&D labs, before 1973. This is the best photo I could find of the now gone R&D labs where the accident happened.

When and Where

We will meet at 2 PM Saturday, April 23rd, at the Appalachian Trailhead for Nuclear Lake. I have attached the GPS coordinates. There is a pin for this location in any map app. (We DO NOT meet at the Appalachian Trail Parking lot on Rt 55). The parking lot holds ten vehicles. After the lot is full, it is ok to park on the side of the road which is old Rt 55.

Appalachian Trailhead for Nuclear Lake

Walk in and out just under two miles

or

Hike around the lake 4.5 miles

The Mid-Hudson Section of the American Chemical Society (ACS) is pleased to announce that we will be participating in the **2022 U.S. National Chemistry Olympiad (USNCO)**. The primary goals of this program are to stimulate interest and achievement in chemistry among high school students throughout the United States and to provide recognition of outstanding young chemistry students, teachers, and schools.

The top ten (10) participants from the Mid-Hudson Section will be invited to take the **National Chemistry Olympiad qualifying exam at Vassar College in Poughkeepsie, NY will be help on Saturday April 30th.** The students who qualify for the National ACS exam from the Mid-Hudson Section will be contacted in early April. National recognition will also be based on the results of this exam. The national exam involves three parts (multiple choice, problem solving and lab practical) administered to more than 1,000 students.

The Section encourages our local schools to participate in this academic competition. All students who participate in the local competition will be recognized and presented with a certificate that they can include in their college portfolio. Students who sit for the national level of the competition will receive an additional certificate for national nominees and a commemorative lapel pin. Approximately 150 top scoring students receive recognition for outstanding performance at the national level. We hope this recognition will serve to stimulate interest in chemistry and to promote a positive attitude toward chemistry.

Good Luck to the students that have already taken the exam and in the Fall 2022 edition of the Mid Hudson Chemist the results will be published regarding how the outstanding young chemists have performed against the rest of the country.

A special Thank You to Lori Wojciechowicz, Ph.D. and Joe Tanski, Ph.D for coordinating the USNCO and for all the hards work and time they have dedicated to the section.

63rd Dutchess County Regional Science Fair Winner

A total of 77 students participated in the 63rd Annual Dutchess County Regional Science Fair last weekend. The event was held in person at Dutchess Community College. Special thanks to Dr. Tony Mitchell, and Dr. Ashu Sharma in joining me to judge the chemistry related projects. Three students were awarded with a certificate and $50 gift card.

Outstanding Award Recipients:

Sandra Wilms, 5th Grade, Hagan Elementary School
Sara Thomas, 6th Grade, Brinckerhoff Elementary School
Magnolia Garbarino, Senior division, Pawling High School

October 2-5, 2022

Northeast Regional Meeting (NERM)

Hyatt Regency Rochester | Rochester, NY

Registration Opens July 2022	Attend NERM	Abstract submissions Open July 2022
	Visit Website	

Committee Contact

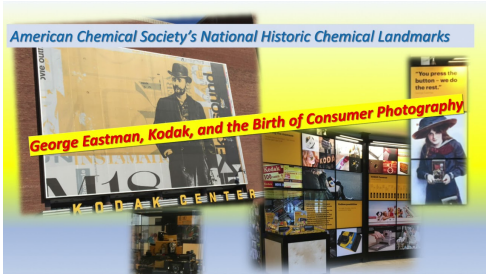
Mark Heitz

Program Chair

David McCamant

About NERM

The Rochester Section of the American Chemical Society is hosting the Northeast Regional Meeting of the ACS in 2022. The meeting will be taking place October 2-5, 2022. Over this four day event, we are excited to share the opportunity with fellow chemists and scientists to learn about the latest advances in chemistry and connect with leaders in the field. Events include lectures from distinguished speakers, awards, workshops, poster sessions, social events and an exposition of companies and vendors. You do not want to miss it!



ACS 2022 president, Angela Wilson will be at NERM2022

We are excited to share the wonderful news that the ACS 2022 president, Angela Wilson, has agreed to preside and speak at the NERM2022 Awards...

Exhibitors at NERM 2022

For more than 125 years, Pfeiffer-Vacuum has served as a reliable name for high-end vacuum technology and first-class service. Visit their website https://www.pfeiffer-vacuum.com/en/ and follow...

Come join us @NERM2022!

ACS Local Section Mid-Hudson

Mount Saint Mary College

The Mid-Hudson Section of the American Chemical Society and Mount Saint Mary College present the

22nd Annual Undergraduate Research Symposium

Friday, April 29, 2022
Mount Saint Mary College
Newburgh, NY 12550

This symposium provides an opportunity for undergraduates from mid-Hudson colleges to present their research in the chemical sciences. All areas of chemistry, environmental science, molecular biology, and related fields are welcome. A poster session will allow students to share their work, followed by an invited lecture and a buffet dinner. ** Current Covid policy allows visitors on campus, with optional masking. This could change, depending on the current local Covid conditions.

Symposium Program

3:30–4:00 PM: Check-In & Poster Set-Up in Aquinas Hall
4:00–4:40 PM: Poster session A
4:40-5:20 PM: Poster session B
5:30–6:00 PM: Awards and Announcements – Hudson Hall
6:00 PM: Lecture by Dr. Darryl Boyd – Hudson Hall
7:00 PM: Buffet Dinner (Reservations required)

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Fabrication of High Refractive Index, Infrared Transmitting Organically Modified Chalcogenide (ORMOCHALC) Polymers

Darryl A. Boyd, PhD: Research Chemist, Optical Sciences Division, Naval Research Laboratory

Abstract:

ORganically **MO**dified **CHALC**ogenide (ORMOCHALC) polymers are novel materials that can be synthesized through the recently discovered inverse vulcanization process. Inverse vulcanization requires the heating of chalcogenide comonomers along with compounds that contain available pi electrons, with sulfur being the most common chalcogen used in these reactions due to its properties and abundance. The composition of the polymers presented includes the use of previously unexplored multi-vinyl branching agents, as well as polymer backbones that contain elements other than sulfur, such as selenium. The crosslinking by unique species, and the use of selenium as a backbone component are significant in that they have a direct and pronounced effect on the optical properties of the polymers produced. Specific optical benefits of ORMOCHALC polymers include the extensive infrared transmission profile and the unusually high refractive indices these polymers possess. The synthesis and optical characterization of unique ORMOCHALC polymers are presented.

Dr. Darryl A. Boyd is a Research Chemist at the US Naval Research Lab (NRL) in Washington, DC working in the Optical Sciences Division. He has a BS in Chemistry from the University of Michigan, and Master and Doctorate degrees from Purdue University in Biochemistry and Inorganic Chemistry, respectively. Following his graduate work, Dr. Boyd began working at NRL as a National Research Council postdoc. His primary research focuses on the development of novel sulfur-based polymers that have unique optical properties, including unprecedented infrared transmission capabilities. His research efforts have earned him recognitions that include winning the 2021 BEYA Admiral Michelle Howard Legacy Award, being named to the 2020 class of 'Distinguished Alumni' for Purdue University's College of Science, the 2019 National Academy of Engineering 'Frontiers in Engineering class,' the 2019 SPIE class of 'Rising Researchers,' and the 2018 class of Chemical & Engineering News 'Talented 12.' Independent of his research job, for years Dr. Boyd has volunteered throughout the country, introducing grade school children to Science Technology Engineering & Mathematics (STEM). This includes efforts through his science-focused YouTube Channel (as Dr. Boyd The Chemist), and his company "Science Made Simple LLC." He is an active member of several scientific organizations, including the ACS, NOBCChE, and the Chemical Society of Washington. Finally, Dr. Boyd and his wonderful wife have a beautiful daughter, with another child on the way.

Call for Poster Abstracts: To present a poster, please submit an abstract of ***200 words or less***. Please make every effort to adhere to the specific formatting guidelines, as follows:

1. Submit each abstract as a separate Microsoft Word file. **The filename should include: the first author's last name, the institution name, and the faculty advisor's last name.**
2. Use 16 point Times New Roman font with one inch margins all around.
3. Do not include references.
4. Include an abstract header with each of the following items centered, on separate lines, and formatted as follows:
   - Title: in bold and all caps
   - List of authors: in bold and separated by commas. The faculty advisor's name should be followed by an asterisk (*).
   - Institution Name: in bold
   - Institution Address: in bold (e.g., **330 Powell Avenue, Newburgh, NY 12550**)
   - Faculty Advisor's Email Address: in bold and lower case

Poster Information: To fit on the poster boards, posters should be approximately 48 inches wide by 36 inches in height.

Abstract submission: Please submit your abstract as an email attachment on or before **Thursday, April 7th** to: acs@msmc.edu . If you are unable to meet this deadline, please contact Dr. Lynn Maelia (lynn.maelia@msmc.edu) to make arrangements. There is a $25 conference fee per poster up to $400 maximum per school, which will be billed to your school. In addition to sending your abstract by email, please register by clicking the link below.

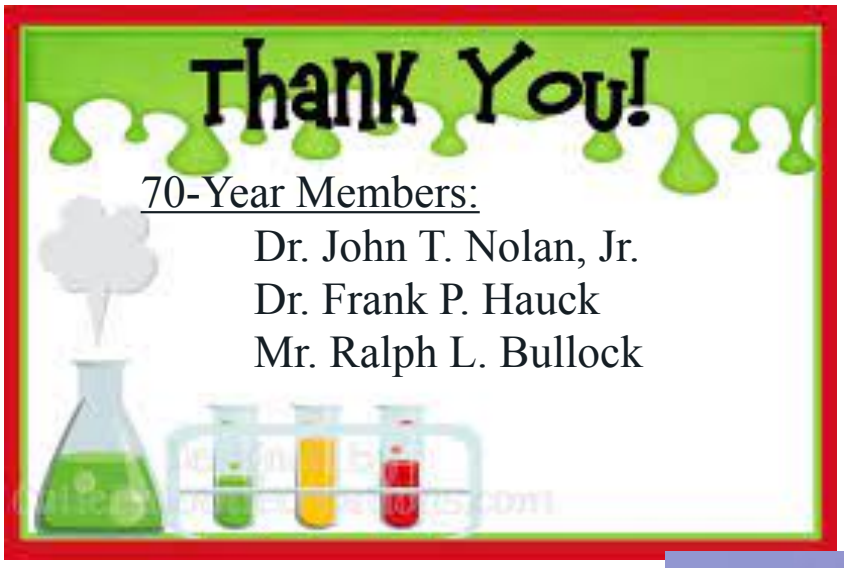
Registration: You must register in advance for this meeting, even if you are giving a poster. You can register at this link:

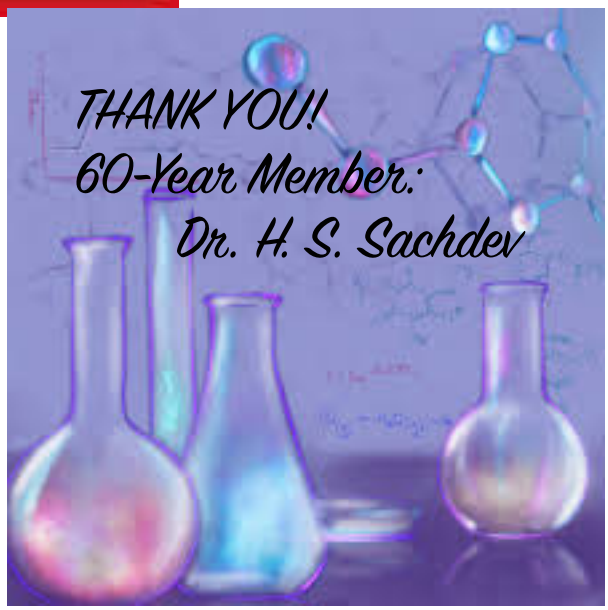
https://forms.gle/Q1WC4myFaG7SWaaJ7

We look forward to seeing you all at the 22nd annual Mid-Hudson ACS Undergraduate Research Symposium. Please check the event website for further details and updates:

https://www.midhudsonacs.org/undergraduate-research-symposium.html

ACS Milestone Honorees for 2022





Chemists Celebrate Earth Week (CCEW)

CCEW is a community-based program of the American Chemical Society (ACS). This annual program unites ACS local sections, student chapters, technical divisions, businesses, schools, and individuals in communicating the positive role that chemistry plays in the world. CCEW occurs annually during the week of Earth Day, which is April 22.

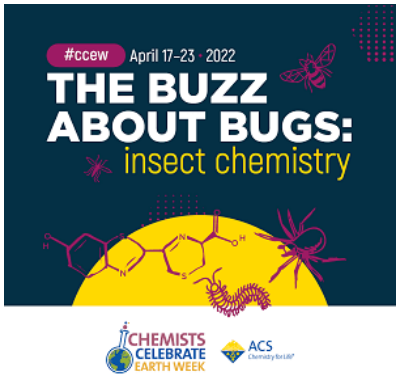
Earth Day was first officially recognized on April 22, 1970 as a way to demonstrate support for a healthy environment, raise awareness about environmental issues, and remind people that we all need to contribute to a sustainable planet.

For years, chemists have been promoting a better world through recyclable plastics, cleaner-burning fuels, phosphate-free detergents, environmental monitoring, and green chemistry initiatives. The ACS joined the Earth Day celebration in 2003. There have been annual CCEW events ever since.

Professor Molenium and Bill Nye at the March for Science, 2017 (Washington, DC)

CCEW 2022
April 17-23 2022
Topic: Insect Chemistry
Theme: The Buzz About Bugs: Insect Chemistry

For more information go to
https://www.acs.org



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Sponsors

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for New York and Connecticut

NSR NY&CT

BASF
We create chemistry

PROCESS NMR ASSOCIATES

WORLD CUP Gymnastics

JPMcHale PestManagement,Inc.

Want to sponsor and contribute to a good cause? All donations will go to the Mid-Hudson ACS scholarship fund and local events. Scholarships will be distributed in the spring of 2023. Watch for more details.

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Chemistry Word Search

N S C L I P C T A N M N H N B I N I N O
C A E R L O D I A O Y S L R O O E T D O
N I P N Y I E O N E T O P M N X A O O N
O O M O C S N H P Y I L U M D O R D M N
X T P R E I T A Y E R U E C I C A C E S
H R U A E B N A X M E T A L R O P P O E
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C E A L H L L I R S S N N R T E E H Y N
M A N A N S L L E D E M T O T L C R M L

ACID
ALLOTROPE
ANION
ATOM
BASE
BOILING POINT
BOND
CATALYST
CATION
CHEMISTRY
COLLOID
COVALENT
CRYSTAL
ENDOTHERMIC
EXOTHERMIC
HETEROGENEOUS
HOMOGENEOUS
IONIC
MELTING POINT
METAL
METALLOID
MIXTURE
NONMETAL
PERIODIC TABLE
PHASE
POLYMER
PRODUCT
REACTANT
REACTION
SOLUTION