Fullerene Chemistry

Fullerenes are synthesized from the arc method from fullerene containing soot. It is based on the Huffman Kratschmer method. Fullerenes are isolated from soot formed when a strong electric current is used to produce an arc between two graphite electrodes. Fullerenes are a allotrope of carbon molecules that consist of carbon connected by single and double bonds in order to form a closed mesh of fused rings. Each ring is five to seven atoms in size. The molecules can form tubes, hollow spheres, ellipsoids or other shapes.
Call For Nominations

Mid-Hudson Section Award for Excellence in High School Chemistry Teaching

The Mid-Hudson Section of the American Chemical Society is seeking nominations for the AWARD FOR EXCELLENCE IN HIGH SCHOOL CHEMISTRY TEACHING. The purpose of this prestigious award is to encourage and reward career excellence in chemistry teaching and the promotion of the field of chemistry.

Selection Criteria

- Nominee must be actively engaged teaching chemistry in a chemical science in high school (grades 9-12) at least half time. The high school must be within one of the following counties in New York State: Dutchess, Orange, Putnam, Sullivan or Ulster.

- Consideration will be given to:
  
  Active involvement in extracurricular activities in chemistry that stimulate the interest of their students in chemistry or related fields, such as participation in science fairs, science clubs, Chemistry Olympiad, etc.

  Willingness to be abreast of new developments in the field and expand self-skills. This can be accomplished as evidenced by the pursuit of a higher degree in chemistry or a chemical science, enrollment in refresher courses and summer institutes, regular attendance at scientific meetings, membership in professional organizations, etc.

- The recipient of this award will be recognized at our Undergraduate Research Symposium and will receive a plaque, monetary gift and a one-year subscription to The Journal of Chemical Education.

NEW FOR 2024: We will also award $200 to the Chemistry Department at the recipient’s high school.

We invite your nominations of outstanding chemistry teachers for this award. Note: Self-nominations will not be accepted. The nomination will be judged on the selection criteria.

If you have any questions or to obtain the nomination form, please contact Patti Cusatis via e-mail (patti.cusatis@basf.com).

The nominations must be submitted no later than March 14, 2024.
Michael H. Tunick had 40 years of experience as a chemist and research chemist at the United States Department of Agriculture after serving there as a student trainee. He planned and conducted research aimed at creating new dairy products and expanding marketability of existing products. He also led and executed his research unit’s effort on basic and applied aspects of rheology of dairy commodities. Dr. Tunick has expertise in thermal analysis using differential scanning calorimetry, microstructural analysis using scanning and transmission electron microscopy, microbiology of bacteria, and rheology of materials using texture profile analysis and small amplitude oscillatory shear analysis. He was also an adjunct faculty member at Drexel University, teaching food chemistry and related courses, until he started at Drexel full-time in September 2017 upon retiring from the USDA. He teaches Food Chemistry, Food Microbiology lecture and laboratory, Food Composition & Behavior, Microbial Food Safety & Sanitation lecture and laboratory, Food Preservation Processes, Food Analysis, and Dairy Science. He also mentors students in the M.S. in Food Science program. Dr. Tunick has authored or coauthored over 140 publications, has coedited ten books, and has co-chaired over 20 symposia in the Division of Agricultural & Food Chemistry in ACS. He served on the ACS Speaker Service with more than 50 presentations at universities and at ACS local sections. ACS has asked him to present webinars to their membership on the chemistry of both cheese and chocolate. He served as AGFD Chair in 2001, Secretary from 2003 to 2018, and Councillor starting in 2019. He became an ACS Fellow in 2011 and Oxford University Press published his book “The Science of Cheese” in 2013.
Molecules to Mozzarella: The Chemistry of Cheese  
Speaker: Dr. Michael H. Tunick  

Abstract of Talk:  

Around fourteen billion pounds of cheese are produced in the US each year, and chemistry is involved in every step of the manufacturing process. The milk coagulates into a curd when starter culture bacteria digest lactose and rennet enzyme destabilizes casein micelles. Cooking and piling the curd forces out whey and fuses the micelles into a matrix, addition of salt helps control microbial growth, and aging leads to protein and fat breakdown by enzymes added to the milk and produced by microorganisms, generating characteristic textures and flavors. Changes in the physical chemistry of cheese may be monitored by electron microscopy and rheology, and chromatographic techniques allow flavor compounds to be identified. Differences in cheesemaking procedures lead to a wide range of varieties, which chemists study in order to provide products that are more acceptable to consumers.

Format: Virtual  
Join Zoom Meeting:  
Meeting ID: 8454377350  
Passcode: chemistry
WHAT IS THE CHEMICAL COMPOSITION OF OUTER SPACE?

AN INTRODUCTION TO ASTROCHEMISTRY

A Lecture & Discussion By
William Istone, Ph.D.
Adjunct Professor of Science, Engineering and Architecture at SUNY Orange

THURSDAY, APRIL 25, 2024 AT 7:00 PM
Gerry Forum 010
Rowley Center for Science and Engineering
Middletown Campus
Parking: Parking Lot #1 on Grandview Ave

You read on the Internet that the atmosphere of Pluto consists of nitrogen with small amounts of methane and carbon monoxide. How did scientists determine this given that Pluto is 3.3 billion miles from Earth and it takes a spacecraft about nine years to travel there? The short answer is astrochemistry. Beginning at Harvard in the late 1900’s, scientists have developed a number of spectroscopic techniques that allow them to determine the chemical composition of objects in outer space. We will discuss a brief history of astrochemistry and a few of the techniques that are commonly utilized.
2024 EARTH DAY HIKE & BIKE CELEBRATION

Hosted by:

When? Saturday, April 20, 2024
Rain Date: Sunday April 21, 2024

What? Earth Day Hike and/or Bike

Where? Meet at Tony Williams Parking Lot on the Rail Trail at 113 South Riverside Rd, Highland, NY 12528

This part of the rail trail is handicap accessible and has plenty of parking!

Refreshments / Snacks / ACS “SWAG” will be handed out at 10:30 am SHARP and then off we go!

Plan to arrive by 10:15 am to park and gather your equipment...

Hiker Checklist of things to bring:
1. Comfortable walking shoes
2. Sun hat
3. Sunblock or sunscreen
4. Light jacket
5. Water bottle
6. Small pack
7. Personal affects
8. Well-behaved dogs on lead are permitted (bring baggies!)
9. Signed Waiver & Photo Release

Biker Checklist of things to bring:
1. Bike that is tuned and ready to go
2. Bike shoes or sneakers
3. Helmet
4. Sunblock or sunscreen
5. Light jacket
6. Water bottle
7. Small pack
8. Personal affects
9. Signed Waiver & Photo Release

Hiking Group Leader: Michelle Rissolo
Biking Group Leader: Elizabeth Harper

Join Us! Registration is only $10
Hikers will walk the rail trail east for 3.6 miles to the Walkway Over The Hudson, those needing a rest will wait at the Ranger Station while the group crosses the Hudson for 1.3 miles and return, and then all will head west and return to Tony Williams Park. The short loop will be about 7.2 miles. The long loop will be about 9.8 miles. This is a quicker than comfortable pace on flat and rolling terrain that is paved and will take about 2.5-3 hours.

Bikers will ride the rail trail east to the Walkway Over The Hudson, cross the Hudson and ride across Poughkeepsie on the rail trail for a total of 10 miles, and then turning around and head west to cross the Hudson and return to Tony Williams Park. The loop will be about 20 miles. This is a casual ride on a paved rail trail with rolling terrain and will take about 2.5-3 hours.

Earth Day Hike and Bike Ride Event

Must sign waiver and photo release. Please have a printed copy when attending the event.

Don’t forget to print and sign the waiver. Bring a copy of the day of the hike.
2024 Poetry Contest

Theme: Get a Charge Out Of Chemistry

2024 CCEW Illustrated Poem Contest

The Mid-Hudson Local Section of the American Chemical Society (ACS) is sponsoring an illustrated poem contest for students in kindergarten through 12th grade.

Contest Deadline: Sunday, April 28, 2024

Submit Entries To: Dr. Lynn Maelia, Mount Saint Mary College, 330 Powell Ave, Newburgh, NY 12550

Prizes will be awarded to top entries

Winners of the Mid-Hudson Local Section’s Illustrated Poem Contest will advance to the National Illustrated Poem Contest for a chance to be featured on the ACS website and to win prizes!

Write and illustrate a poem using the CCEW theme, “Get a Charge Out of Chemistry.”

Your poem must be no more than 40 words and in the following styles to be considered:

HAIKU - LIMERICK - ODE - ABC POEM - FREE VERSE - END RHYME - BLANK VERSE

Possible topics related to the battery theme include:

- Alkaline batteries
- Anode
- Atoms
- Cathode
- Disposable batteries
- Electrons
- Rechargeable batteries
- Renewable energy

Entries will be judged based upon:

Artistic Merit - use of color, quality of drawing, design, and layout

Poem Message - fun, motivational, inspiring about yearly theme

Originality/Creativity - unique, clever and/or creative design

Neatness - free of spelling and grammatical errors

Contest rules:

All entries must be no more than 40 words, and in one of the following styles to be considered. Only one entry per student will be accepted, all entries must include an entry form. The text of the poem should be easy-to-read and may be typed or handwritten. Poems may be submitted by hand on an unlined sheet of paper, not larger than 8 1/2” x 11”, or scanned and sent via email. Illustrations may be created using crayons, watercolors, other types of paint, colored pencils, or markers. The illustrations may also be electronically created by using a digital painting or drawing app on a computer, tablet, or mobile device.

The text of the poem should be on a separate form from the illustrations. Acceptance of prizes constitutes consent to use winners' first name and last initial, along with the name of the ACS Local Section, on the ACS web pages and in the magazine, Chemical & Engineering News.
2024 Poetry Contest

Chemists Celebrate Earth Week (CCEW) Illustrated Poem Contest
ENTRY FORM

Please fill out this form and attach it after the poem. All fields are required. Incomplete forms will invalidate the entry.

The deadline for the Mid-Hudson Local Section Contest is April 28.

Submit poems to Lynn Maelia, Mount Saint Mary College, 330 Powell Ave, Newburgh, NY 12550 or via e-mail.

<table>
<thead>
<tr>
<th>Student and Organization Information</th>
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<tbody>
<tr>
<td>Student Name:</td>
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<tr>
<td>Student Grade:</td>
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<tr>
<td>Parent/Guardian Name:</td>
</tr>
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<td>Parent/Guardian Email:</td>
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<td>Parent/Guardian Address:</td>
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<td>Parent/Guardian City:</td>
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<td>State: Zip:</td>
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<td>School or Sponsoring Group (e.g. Boys and Girls Club or Scout Troop, 4-H, etc.):</td>
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<tr>
<td>Teacher Name:</td>
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<td>Teacher Email:</td>
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<td>School Address:</td>
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<td>School Address 2:</td>
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<td>School City: State: Zip:</td>
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</tbody>
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Please send any follow up for the student to the parent or school address.

Illustration Type (Check one)

- Hand-drawn art
- Digitally created art

If the poem was digitally created, please name the software used in the box below:

Judging Category by Grade (Check one)

- K-2
- 3-5
- 6-8
- 9-12

FOR LOCAL SECTION USE ONLY

- Local Section Name: Mid-Hudson
- CCEW Coordinator Name: Lynn Maelia
- CCEW Coordinator Email/Phone: lynn.maelia@msmc.edu/ 845-569-3131

More information is available at www.acs.org/ccew.
Call for Applications for
2024 Undergraduate Student Research Awards

Submissions due Monday, April 1, 2024

The Mid-Hudson Section of the American Chemical Society (ACS) invites applications for the 2024 Mid-Hudson ACS Undergraduate Student Research Awards from student researchers who plan to present their work at the 2024 Undergraduate Research Symposium (URS). Outstanding submissions will be selected to receive a monetary award. This is a separate application and is not required of all students presenting posters. Only students who wish to be considered for this prestigious award need apply.

Rationale
The Mid-Hudson Section wishes to reward undergraduate students who choose to write a short summary about their research and scholarship activities. The paper is to be written for a general scientific audience with a background in the chemical sciences without familiarity of the specific research effort.

Criteria
Research work should be completed by a student currently enrolled (2023-2024 academic year) as an undergraduate at one of colleges in the Mid-Hudson ACS area. Students must also present their work at the 2024 Mid-Hudson ACS URS held at State University of New York (SUNY) at New Paltz on April 19, 2024.

Application Format and Procedure:
All papers submitted must be primarily chemistry, not biology or physics.

Format: The paper must be written in Microsoft Word with a font type of New Times Roman and a font size of 12. Margins should be set to the Narrow setting under page layout/margins in Word. The description part of the paper may not be longer than two pages. Acknowledgments and references sections may exceed the two page limit. Papers longer than two pages will not be considered.

In writing the research paper, is very important to consider that your paper will be evaluated by chemists who may not have a background in your specific area of research. Therefore, you need to communicate your research in terms that can be understood by a broad scientific audience. This is the most important aspect of the paper for reviewers.
The paper should be written in a scientific format and divided into sections in the following order:

1) Title with authors: The title of the paper should be at the top with the authors' names underneath. The student submitting the paper for the award must be clearly indicated by bolding and underlining that author's name.

2) Introduction: In communicating the research to an audience from a range of chemical backgrounds, you will want to clearly outline what you studied and why you studied that topic.

3) Experimental: Provide a brief review of your experimental design and data.

4) Results and Discussion: This is your chance to WOW the reviewers with your fabulous work. Remember that reviewers will not be familiar with your work, so you must educate them. After years of learning and studying, this is your opportunity to educate others. Make sure you include all relevant chemical structures, equations and reactions. Although you have spent hours dedicated to your research and are familiar with the reactions and chemicals involved, this information is new to the reviewers. The better the reviewers understand what you are doing and what you have accomplished, the better your chances of being recognized.

5) Conclusion: This needs to be consistent with the previous sections of the paper and should summarize what your research has accomplished and if applicable, address future research efforts.

6) Acknowledgments and References: These sections may exceed the two page limit and should be as extensive and comprehensive as needed.

In summary, it is important to remember that reviewers are not experts in your area of research. Your job is to educate them on your research and impress upon them how exciting and interesting your research is. This does not mean you have to be overly technical in your writing. You should include all the relevant chemistry involved in the project (e.g. important chemical structures and reactions), while making sure that the paper is readable, and the information is cohesive. Reviewers must be able to understand what you have accomplished.

Submission procedure:
Submissions should be sent by e-mail as an attached Word document to Dr. Chi Nguyen at chi.nguyen@westpoint.edu by Monday, April 1, 2024. The subject line of the e-mail should clearly indicate that you are submitting an application for the URS Student Research Award.
Congratulations on 50 years with the American Chemical Society

The Milestone Anniversary members will be honored at the Undergraduate Research Symposium on April 19, 2024 at SUNY New Paltz

Dr. Robert. E. Davis
Dr. Greesh C. Goyal
Mr. Laurence G. Hoard
Mr. William K. Istone
Mr. Arthur D. Jung
Dr. Benjamin J. Kaufman
Dr. Louis Rosenfeld
Mr. Richard Skrobanski
Come Join Us for a Luncheon

Join us on our next planning meeting for the 2024 activities

When: Saturday March 2, 2024 at 12pm

Where: Hudson Taco located by the waterfront in Newburgh, New York at 27 South Water Street

Why: To gather for a lunch to discuss and plan the 2024 activities. Of course to have fun and hang out with fellow chemists.

Cost: Cover your own tab, but the excitement is on us

RSVP: before February 29, 2024
Contact Michelle Rissolo at (845) 399-1985 or RissoloM@outlook.com
The Hudson Valley Science Café is a monthly gathering open to the public. The essence of a Science Café is informality between the presenters and members of the community. Meetings are usually on the 4th Wednesday of the month.

Check the website for any upcoming presentations

For information, or to suggest a speaker, please contact Dr. Toby Rossman at tobyrossman@yahoo.com

Please check our page https://www.facebook.com/hudsonvalleysciencecafe for more information
2024 Executive Board Members

Chair: Patti Cusatis
Past Chair: Michelle Rissolo
Secretary: Josh Frey
Alternate Councilor: Dawn Riegner
Co-Awards Chairs: Patti Cusatis and Lynn Maelia
Membership Chair: Maryellen Sinclair
SCC Chair: Glenn Roy
USNCO Chair: Joe Tanski
Earth Day Local Section Coordinator: Joan Skinner
Mid-Hudson Chemist Editor/Publisher: Maryellen Sinclair

Chair-Elect: Ken McDonald
Treasurer: Joan Skinner
Councilor: Lynn Robinson
Members-at-Large: Ines E. Augie, Ashu Sharma and Lynn Maelia
DCRSF: Nicoline Kiwiet
Earth Day Hike: Michelle Rissolo
NCW Chair: Chi Nguyen
Publicity: Maryellen Sinclair
WCC Chair: Lynn Robinson
URS Chair: Chris LaFratta
Webmaster: Patti Cusatis
YCC Chair: TBA
Get Involved and Connect With Us

Connect with us at:

Facebook:
www.facebook.com/MidhudsonACS

Join us on the Web and sign up for our list serve:
www.midhudsonacs.org

Get involved at our monthly board meetings.

Our next meeting is
Tuesday March 12, 2024 at 7 pm via Zoom
Contact our Chair Patrice Cusatis
patti.cusatic@basf.com