

Mid Hudson Chemist

Mechanism Of The Month

Name: Maillard Reaction (non-enzymatic browning)

Origin: First described by French physician-chemist Louis-Camille Maillard in 1912, later mechanistically expanded by John E. Hodge (1950s).

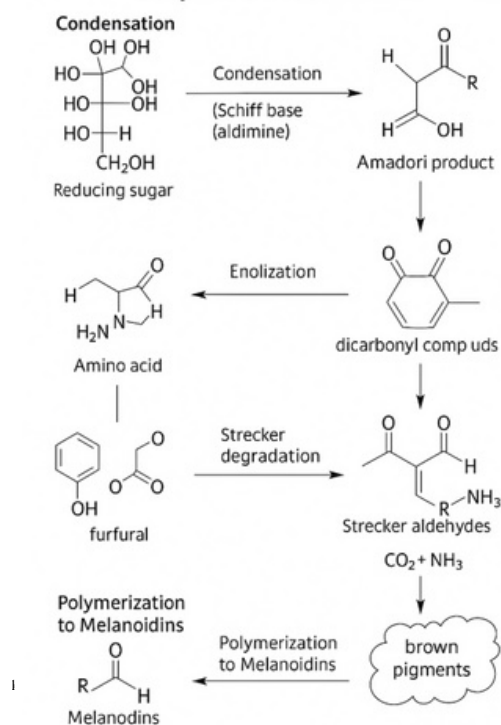
What it is: A cascade of reactions between reducing sugars (e.g., glucose/fructose) and amino groups (free amino acids or lysine side chains in proteins) that creates flavor/aroma compounds and brown melanoidins.

Why it screams fall: Dry-heat cooking of autumn foods—roasted pumpkins/squash, sweet potatoes, maple-glazed carrots, apple pie crusts, toasted marshmallows, coffee, and seared turkey skin—all showcase Maillard notes (nutty, toasty, caramel-like, savory).

Key levers for cooks/scientists:

- Water activity: drier surfaces brown faster.
- pH: slightly basic speeds up (baking soda trick).
- Temperature: typically noticeable >140–160 °C (but begins lower).
- Time & reactants: more reducing sugar + amino groups → more browning/flavor.
- Applications beyond the kitchen: food science, coffee/beer roasting, shelf-life/quality control, biomaterials aging, and protein glycation in biology.

Maillard Reaction Stepwise Mechanism



In This Edition

Recap of the 2025 Section Events

2025 Illustration Contest Winners

2026 Executive Board Elections

URS recap and save the date

Poetry Contest Deadline

Connect with us at:

Facebook:

www.facebook.com/MidhudsonACS

Sign up for our list serve and Join Us at:

www.midhudsonacs.org

Get involved at our monthly
board meetings.

Our next meeting is on
November 12, 2025 at 7 pm via Zoom
Contact Ken McDonald
kenrock66@gmail.com

Mid Hudson Chemist

2026 Call for Volunteers

Election of Officers for the 2026 Mid-Hudson ACS Executive Board

Here is a great opportunity to get involved in our local section! We are looking for volunteers to run for open positions for the Mid-Hudson ACS Executive Board for the 2026 calendar year.

If you are interested in running for office, please email Josh Frey at josh.d.frey@gmail.com.

If you would like more information about the open positions, please contact Ken McDonald at kenneth.mcdonald2@westpoint.edu.

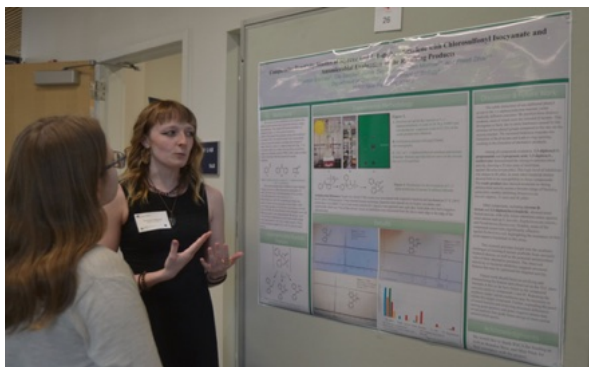
Positions-open for 2026:

- Chair-Elect (3-year term)
- Treasurer
- Secretary
- Member-at-Large (3-year term)
- Councilor (3-year term)

Mid Hudson Chemist

2025 Undergraduate Research Symposium Recap

We celebrated another successful year of student innovation and collaboration in chemistry and the sciences. Outstanding research presentations showcased the creativity and meticulousness of our undergraduates.



2025 Award Winners

First Place

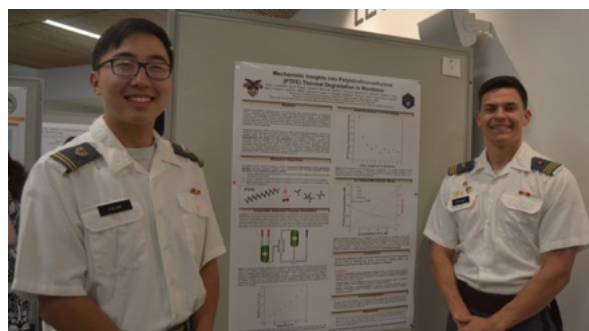
Shannon Seymour, Advisor: Dr. Preeti Dhar, SUNY New Paltz
Paper title: *Comparative Reactivity Studies of Styrene and 1,1-Diphenylethylene with Chlorosulfonyl Isocyanate*

Second Place:

Andrew E. Gatzke, Noah R. Keith, Ethan A. Fergel, Advisor: Dr. Enoch Nagelli, United States Military Academy
Paper title: *Hydrolyzed PVA Coated Separators for Electrochemical Optimization of Redox Flow Batteries*

Third Place

Roudro Saha, Advisor: Professor Zachary Donhauser, Vassar College
Paper title: *Characterizing the Polymerization and Structural Properties of $\Delta 391$ Tau*



Save the Date: 26th Annual Undergraduate Research Symposium

When: April 24, 2026 Where: Marist University

_Poster presentation sessions across chemistry and allied fields

Prizes awarded; faculty and judges welcome

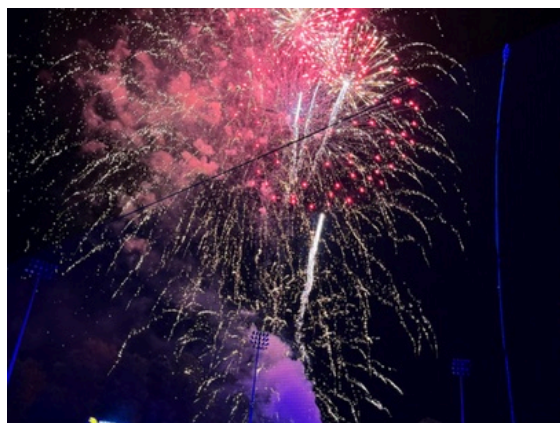
Abstracts open: early Spring 2026

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Mid Hudson ACS Heads to the Ball Field

In September, members of the Mid-Hudson ACS Young Chemists Committee enjoyed a night of baseball and networking at the Hudson Valley Renegades game the event brought together students, career chemists and ACS members from all corners of industry. It was an evening of community, fun, and chemistry inspired camaraderie. Attendees had the chance to connect outside of the lab and under the lights in order to cheer on the home team.

We would like to thank all the volunteers who made this event possible.



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Mid Hudson ACS and the Girl Scouts

The Mid-Hudson ACS proudly supports local Girl Scouts in earning their Chemistry Badge through hands-on experiments and STEM exploration. Volunteers guide the Girl Scouts through pathways of discovery and fun through chemistry.



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2025 National Chemistry Week Poem Contest



2025 NCW Illustrated Poem Contest The Hidden Life of Spices

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: October 24

Prizes: Gift Cards

Contact: Lynn Maelia, lynn.maelia@msmc.edu

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 NCW theme, "**The Hidden Life of Spices.**"

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 theme include:

- Turmeric
- Molecules
- Capsaicin
- Cinnamon
- Aroma
- Fragrance
- Gingerol
- Eugenol
- Spices
- Chili

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



Mid Hudson Chemist

2025 National Chemistry Week Poem Contest



National Chemistry Week (NCW) 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.

A parent/guardian signature is required for the student to enter this contest.

The deadline for the Mid-Hudson Local Section Contest is October 24, 2025.

Submit poems to Lynn Maelia - lynn.maelia@msmc.edu.



Student and Organization Information		
Student Name:		
Student Grade:		
Parent/Guardian Name:		
Parent/Guardian Email:		
Parent/Guardian Address:		
Parent/Guardian City:	State:	Zip:
National Chemistry Week (NCW) Illustrated Poem Contest Permission & Release		
1. I represent that I am the parent/guardian of the above-named student, and grant permission for my student to enter the National Chemistry Week (NCW) Illustrated Poem Contest ("Contest").		
2. I grant permission and authorize the American Chemical Society to collect and use the personal information provided in this form about me and my student to administer this contest, or as otherwise set out in the Rules. Except where prohibited by law, participation in the Contest constitutes me and my student's consent to the storage, use, and disclosure of information provided in this form.		
3. I hereby grant permission for my student's submission to be exhibited in any publications, websites, and/or social media which may be used for the purpose of administering and promoting the Contest.		
I acknowledge that I have read, understood, and agree to the Rules and that I have read this Entry Form prior to signing it.		
Parent/Guardian Signature:		Date:
School or Sponsoring Group (e.g., Boys and Girls Club or Scout Troop, 4-H, etc.):		
Teacher Name:		
Teacher Email:		
School Address:		
School Address 2:		

Mid Hudson Chemist

2025 National Chemistry Week Poem Contest

School City:	State:	Zip:	
Please send any follow up for the student to the <u>parent</u> <input type="checkbox"/> or <u>teacher</u> <input type="checkbox"/> email or address.			
<i>By including your information, you are consenting to receive email or mailing notifications from the American Chemical Society regarding the Contest entry.</i>			
Illustration Type (Check one)			
Hand-drawn art <input type="checkbox"/>	Digitally created art <input type="checkbox"/>		
If the poem was digitally created, please name the software used in the box below:			
Judging Category by Grade (Check one)			
K-2 <input type="checkbox"/>	3-5 <input type="checkbox"/>	6-8 <input type="checkbox"/>	9-12 <input type="checkbox"/>
FOR LOCAL SECTION USE ONLY			
Local Section Name:	Mid-Hudson		
NCW Coordinator Name:	Lynn Maelia		
NCW Coordinator Email/Phone:	Lynn.maelia@msmc.edu / 845-569-3131		

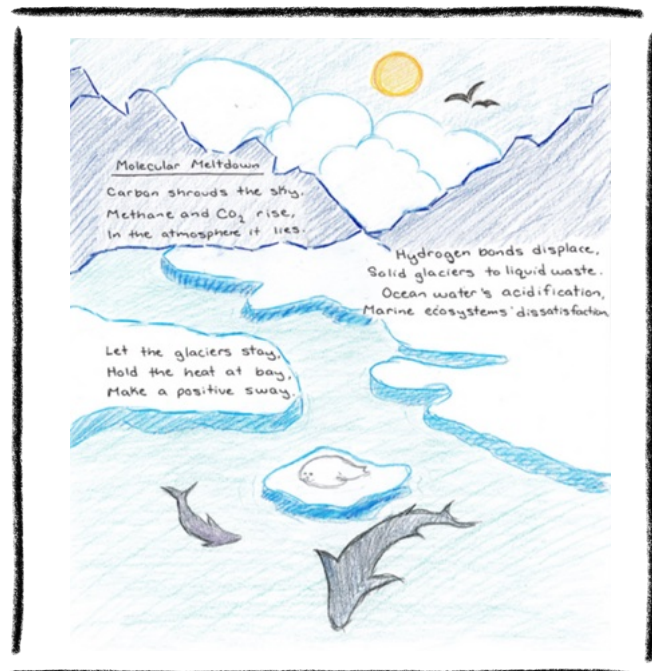
A parent/guardian signature indicates agreement for the student to enter the contest. More information is available at www.acs.org/ncw.

Contest rules:

- All poems must be no more than 40 words, and in one of the following styles to be considered: Haiku, Limerick, Ode, ABC poem, Free verse, End rhyme, and Blank verse.
- Entries are judged based upon relevance to and incorporation of the NCW theme, word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation.
- All entries must be original works without aid from others. Poems may be submitted by hand on an unlined sheet of paper not larger than 11" by 14" or scanned and sent via email. Illustrations may be created using crayons, watercolors, other types of paint, colored pencils, or markers. The illustration may also be electronically created by using a digital painting and drawing app on a computer, tablet, or mobile device.
- The text of the poem should be easy to read and may be typed before the hand-drawn or digital illustration is added, or the poem may be written on lined paper, which is cut out and pasted onto the unlined paper with the illustration.
- No clipart or unoriginal images can be used.
- Only one entry per student will be accepted; all entries must include an entry form. If the illustration is created using a digital painting or drawing app, the name of the program must be included on the entry form.
- Acceptance of prizes constitutes consent to use winners' first name, and entry for editorial, advertising, and publicity purposes.
- Do **not** place participant names on the front of your poem

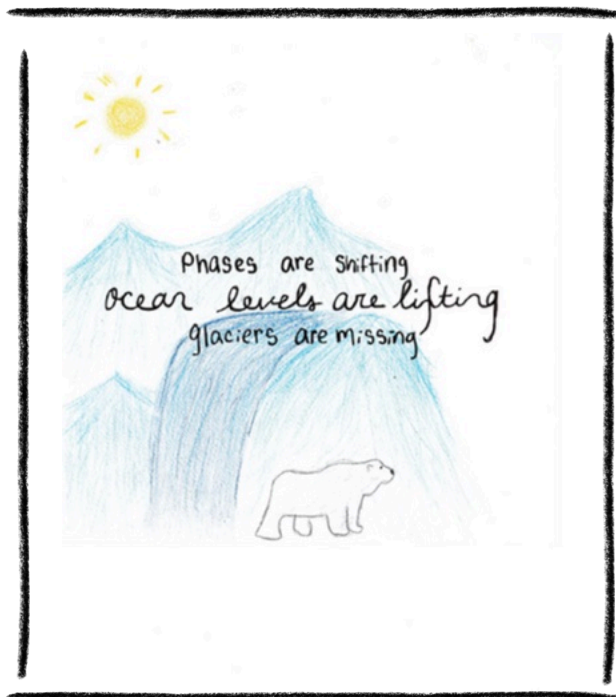
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2025 CCEW Illustrated Poem Contest Winner



Congratulations to the winners of the 2025 Chemist Celebrating Earth Week Illustrated Poem Contest. This year's theme, "Hot Topic: Cool Chemistry" sparked creative illustrations celebrating how chemistry helps tackle today's environmental challenges.

Thank you to all who shared their words to celebrate science and sustainability through illustration!



Mid Hudson Chemist

2025 Executive Board

Chair: Ken McDonald

Past Chair: Patti Cusatis

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 Chair: Joan Skinner

Mid-Hudson Chemist
Editor/Publisher:
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Councilor: Lynn Robinson

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Nicoline Kiwiet

DCRSF: Nicoline Kiwiet

Earth Day Hike: Butch Dery

NCW Chair: Chi Nguyen

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URS Chair: Pamela St. John

Webmaster: Patti Cusatis

YCC Chair: Jade Fontanez

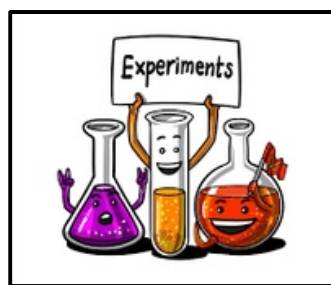
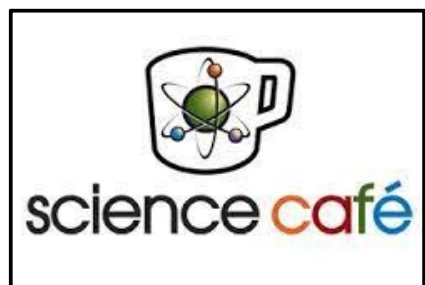
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The Hudson Valley Science Cafe

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 the page
<https://www.facebook.com/hudsonvalleysciencecafe>
for more information