ACS Chemistry for Life®

Richland Section
American Chemical Society

OCTOBER 2025

INSIDE THIS ISSUE

ACS Richland Local Section is now on LinkedIn!

We will be sharing info related to local section events and opportunities.

LET'S CONNECT!
https://www.linkedin.com/company/american-chemical-society-richland-local-section/

Section Elections

2026 Section Officer Voting Instructions

The election for officers of our local ACS Section will be conducted electronically. The ballot will be sent to the email address you provided to ACS in your "Yellow Book" member registration. You will receive an email with a link to a survey. Simply follow the link to see the ballot where you can vote for each position. The voting process is very straightforward and will take about one minute. Note that the ballot has the option for write-in candidates, per our bylaws. **Voting will open on November 1, 2025 and close on November 15, 2025.**

Any member who wishes to vote with a paper ballot may request one by contacting Steve Krogsrud at steve_krogs@hotmail.com

☑ **BALLOTS DUE NOVEMBER 15**

PLEASE VOTE
YOUR PARTICIPATION IS APPRECIATED!

ANNUAL MEMBER RECOGNITION SOCIAL

Featuring a presentation on women in the Cold War years at Hanford.

Another successful year is coming to a close and to celebrate we invite YOU, our members and volunteers, to our Annual Social & Awards Ceremony.

The social offers the opportunity to meet old friends and make new ones. It also gives us the opportunity to share with you what the section has accomplished throughout the year. As always, we will be celebrating our hardworking members and volunteers!

This year's featured speakers are Terri Andre and Megan Simpson from the **B Reactor Museum Association** presenting ***Hanford Women During the Cold War Years (1947–1991)***. Their talk will highlight the vital contributions of women to the evolving mission of the Hanford Site in the post–World War II era. Attendees will also have the opportunity to view research posters presented by the students of Eastern Oregon University.

As always, a catered dinner will be provided, starting at 6:30. Attendees are encouraged to bring a bottle of wine to share. It will be an evening of good food, great company, and engaging history!

SAVE THE DATE! NOVEMBER 7, 6-8:30PM
RIVERVIEW ROOM / RICHLAND COMMUNITY CENTER 500 Amon Park Drive
RSVP https://forms.gle/6Hmy3okdsJMvU8oR9

PRESENTING THE 2026 SLATE OF CANDIDATES

CHAIR-ELECT *Kristin Omberg*

Kristin Omberg is a Richland native and is currently a senior technical advisor in the National Security Directorate at Pacific Northwest National Laboratory. As an ACS volunteer, she has served in numerous roles, including Chair for the Richland and Central New Mexico Local Sections; Chair of the ACS Committee on Budget and Finance; and Chair of the ACS Committee on Chemistry and Public Affairs. She is currently a Trustee of the Board for Member Insurance Programs and a member of the ACS Committee on Public Relations and Communications. She also volunteers with Scouting America, and recently led a team of volunteers in the first major rewrite of the Chemistry Merit Badge in decades. Before coming to PNNL, she spent 16 years at Los Alamos National Laboratory, and one year as the ACS Congressional Science Fellow, where she worked with the U.S. Senate Committee on the Budget. She is a Fellow of the American Chemical Society, and a Fellow of the American Association for the Advancement of Science.

COUNCILOR *David Heldebrant*

Dr. David (Dave) Heldebrant was born in Pasadena, California and went to school at the University of California at Davis, receiving an undergraduate degree in Fiber and Polymer Science (2001) and a PhD in organic chemistry (2005). He has lived in Richland since 2006 and worked at the Pacific Northwest National Laboratory where he is the Director of the Physical Sciences Division. His research focuses on point-source carbon capture and CO2 upcycling to fuels, chemicals, and materials. Dave has served ACS at the local, divisional, regional, and national levels, having been recognized as an ACS Fellow in 2022. Dave began his service to the Richland local section as Chair in 2012 and as a member of the executive committee for the past thirteen years, and the past six years he has served as the section's Alternate Councilor. Dave has also served as Program Chair, Chair, and is currently an Alternate Councilor for the Division of Energy and Fuels. Additionally, Dave also co-chaired the national thematic programming "Chemistry of Resilience" for the ACS Fall National Meetings in 2021 in Atlanta, GA. He has enjoyed serving the local section for the past thirteen years and looks forward to the opportunity to continue his service to the Richland section, its members, and the scientific community.

COUNCILOR *Shirmir Branch*

Shirmir Branch is a Chemist at Pacific Northwest National Laboratory (PNNL). She joined the Nuclear Chemistry & Engineering group at PNNL from the University of Cincinnati in 2018, where she received her PhD in analytical chemistry. The focus of her research at PNNL involves separations techniques in various media, and molten salt chemistry and spectroscopic monitoring development. She has been a member of the American Chemical Society since 2009 and has participated in national, reginal, and local meetings as a presenter and event organizer. She has been involved in the local Richland section since 2016 and currently serves as the section's Past Chair. She has also served as the secretary and Chair. Shirmir has also participated in several outreach events with the Tri-Cities. She is founding member of the local Women Chemists Committee. Shirmir looks forward to continuing to serve the members of the Richland section.

TREASURER *Jared Kroll*

Jared is a chemist at Pacific Northwest National Laboratory (PNNL) where his current research focuses on CO_2 capture and conversion. He has been able to participate in many different projects throughout his thirteen years at PNNL that have reflected his passion for chemistry, including modeling properties of nuclear waste glasses, development of alternative waste forms for the immobilization of nuclear waste, and the synthesis of chemical probes for investigating biological systems. He has published over a dozen journal articles and technical reports, and has had the chance to speak at several material science and chemistry conferences throughout the U.S. and abroad. In addition to his work at PNNL, he has had the opportunity to work as an Adjunct Chemistry Instructor at Columbia Basin College.

Jared holds an A.A.S. in Nuclear Technology from Columbia Basin College, as well as a B.S. in Physical Sciences with a Minor in Chemistry, and M.S. in Chemistry from Washington State University. He has been an active member of ACS since 2021 where he served as Chair of the Chemical Safety Committee for the past three years, and Treasurer in 2025. This year, he is looking forward to serving another term as Treasurer of the ACS Richland Section.

SECRETARY *Cassandra Reese*

Dr. Cassandra Reese is a Materials Scientist in the Applied Materials and Manufacturing Group at PNNL, where she focuses on polymers and composites. Since joining PNNL in October 2024, her work has centered on lightweight structural composites for energy-efficient vehicles, methods to recycle and upcycle fiber-reinforced composites, and the characterization of materials to enable a future hydrogen economy. Her research combines fundamental polymer science with applied materials development to address challenges in energy and advanced manufacturing.

Prior to PNNL, Dr. Reese worked at Singular Genomics, a biotechnology start-up focused on DNA sequencing. Dr. Reese's scientific career also includes a postdoctoral appointment at Los Alamos National Laboratory, where she applied additive manufacturing techniques to design functional composite materials for national security applications. She earned her Ph.D. in Polymer Science and Engineering from the University of Southern Mississippi and conducted undergraduate research at the University of San Diego.

Her research and leadership have been recognized with awards including the CAS Future Leader Award (2020), the Younger Chemists Committee Leadership Development Workshop Award (2019), and recognition at the ACS POLY Excellence in Graduate Polymer Research Symposium (2018). She was also an NSF Graduate Research Fellow and an NSF NRT INTERFACE Trainee.

Dr. Reese has been actively engaged in broadening participation in STEM. While at the University of Southern Mississippi, she served as Vice President and President of Women in Science and Engineering (WISE) and the ACS Division of Polymer Chemistry (POLY) and Polymeric Materials: Science and Engineering (PMSE) student organizations. She organized conferences and professional development initiatives, raising over $15,000 in support of student-led events, including the first WISE conference and the Applied Polymer Extension Consortium (APTEC).

An ACS member since 2014, Dr. Reese is eager to continue contributing to the ACS community and serving the Richland local section. She looks forward to supporting outreach, professional development, and networking opportunities for members while fostering engagement between government laboratories, academia, and industry.

Through her experience in research, mentoring, and leadership, she aims to strengthen the ACS community and enhance the resources and programs available to its members.

CHAIR'S CORNER by Sonia Anguiano

Dear Members,

Thank you! Your hard work, support, patience, and dedication throughout the year have made such a difference—to your peers, team members, friends, family and our section. As the year winds down, we approach our end-of-year celebration and elections. If you're interested in taking a bigger role in our section, we encourage you to reach out to any of our officers or committee chairs. Your time and involvement are what drive our section's continued success, and we couldn't do it without you!

We appreciate all that you do and look forward to celebrating together soon.

Best, Sonia

POINT TO PONDER

"What you do makes a difference, and you have to decide what kind of difference you want to make." — ***Jane Goodall***

UPCOMING EVENTS

NOVEMBER 7

ANNUAL MEMBER RECOGNITION SOCIAL 6-8:30PM

Riverview Room, Richland Community Center, 500 Amon Park Dr., Richland, WA 99352

Information: vanessa.dagle@pnnl.gov

RSVP by October 31: https://forms.gle/6Hmy3okdsJMvU8oR9

NOVEMBER 15

SECTION ELECTION BALLOTS DUE

Shirmir Branch: shirmir.branch@pnnl.com

Content for future newsletters may be sent to the Section editor Steve Krogsrud: steve_krogs@hotmail.com

Graphic design by Visual Verve Design & Print
www.visualvervedesign.com

CHEMLUMINARY AWARD

Congratulations to the Richland Section for receiving the "Outstanding NCW Event for a Specific Audience" ChemLuminary award! The award was presented at the ACS Fall 2025 Meeting on August 17, 2025, in Washington DC. The section received the award for "Investigators of Science," which was hosted at Eastern Oregon University in conjunction with the 2024 National Chemistry Week celebrations.

Over 80 students from grades 6-8 participated in activities, exploring chemistry, biology, mathematics, and computer science. The event focused on investigating potential causes of fish die-off in the fictional Gray Bay. Chemistry activities included a session on water chemistry, where students tested how nitrates, phosphates, toxic metals, or oil spills from human activity could impact fish health. In a related math and computer science session, the NCW theme 'Picture Perfect Chemistry' was used to introduce fluorescence microscopy and software that participants used to analyze fluorescent images of diseased fish. Biology activities examined the role of parasites, explaining how these organisms thrive in warmer waters and can harm fish gills. Over 30 volunteers helped to organize and run the event.

The Section was also invited to present a poster at a poster session preceding the ChemLuminary award ceremony highlighting multiple activities conducted throughout 2024. Recognizing the high level of engagement by many volunteers, the Richland Section was also finalist for the "Outstanding Performance by a Local Section – Medium Small Size".

Thank you to all the volunteers that helped achieve such extraordinary recognition!

CHEMSHORTS MORE SECRET MESSAGES BY DR. PAUL BRANDT

In January, I wrote about how you can write a secret message with the spice turmeric. This time we'll use an Elmer's Disappearing Purple Glue Stick.

MATERIALS

- Disappearing Purple Glue Stick
- Vinegar
- Q-tip or Paint Brush
- Sheet of White Paper or Cardstock

CAUTION

Vinegar is a weak acid and if it gets in your eyes it will sting.

EXPERIMENT

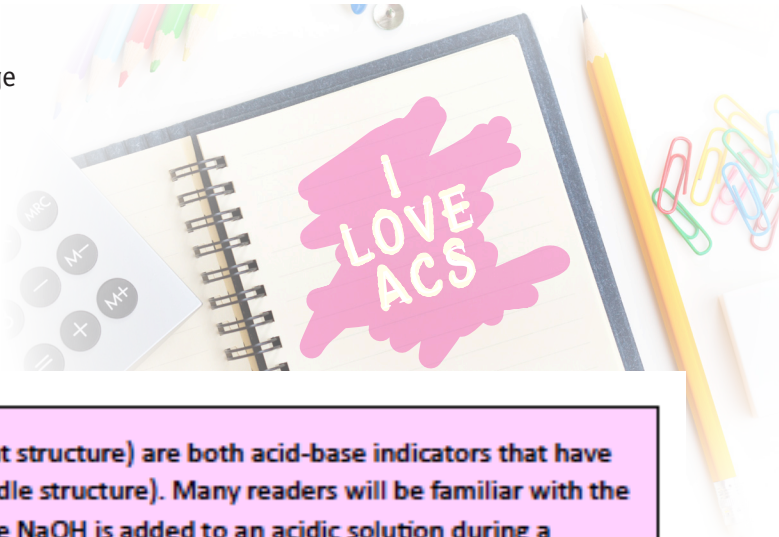
Using the Q-tip, dip it in the vinegar and write your message on the paper. Allow it to dry. Wipe over the message with the glue stick. Once the glue dries, the message disappears so you may need to work quickly.

WHAT'S HAPPENING?

o-Cresolphthalein is the active ingredient in the glue stick (the little o means "ortho"). This compound is an acid-base indicator. It is a colorless molecule below a pH of 8.2 (acidic) but is purple above a pH of 9.8 (basic). The gluestick itself is slightly basic and thus it is purple when mixed with the o-cresolphthalein. When the glue touches the acidic vinegar molecules, the o-cresolphthalein acidifies and becomes colorless. The compound needs to be wet in order for the purple color to exist so spraying the message with water will make the image reappear.

EXTENSION

Can you find other substances around the house that will change the gluestick from purple to colorless (juices, sprite, etc.)?

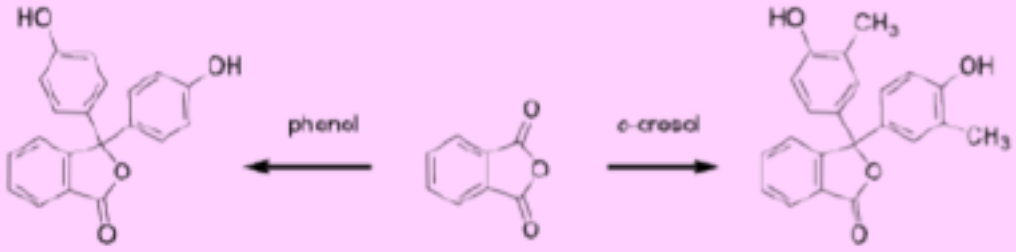


REFERENCES

https://www.youtube.com/watch?v=FtpCUxvbRrk

To view all past "ChemShorts for Kids", go to:
https://chicagoacs.org/ChemShorts

Phenolphthalein (left structure) and *o*-cresolphthalein (right structure) are both acid-base indicators that have in common their preparation from phthalic anhydride (middle structure). Many readers will be familiar with the pink color that appears when enough of a basic solution like NaOH is added to an acidic solution during a titration experiment. For fun try opening this interactive image of phenolphthalein and using your mouse to manipulate the 3D molecular structure.



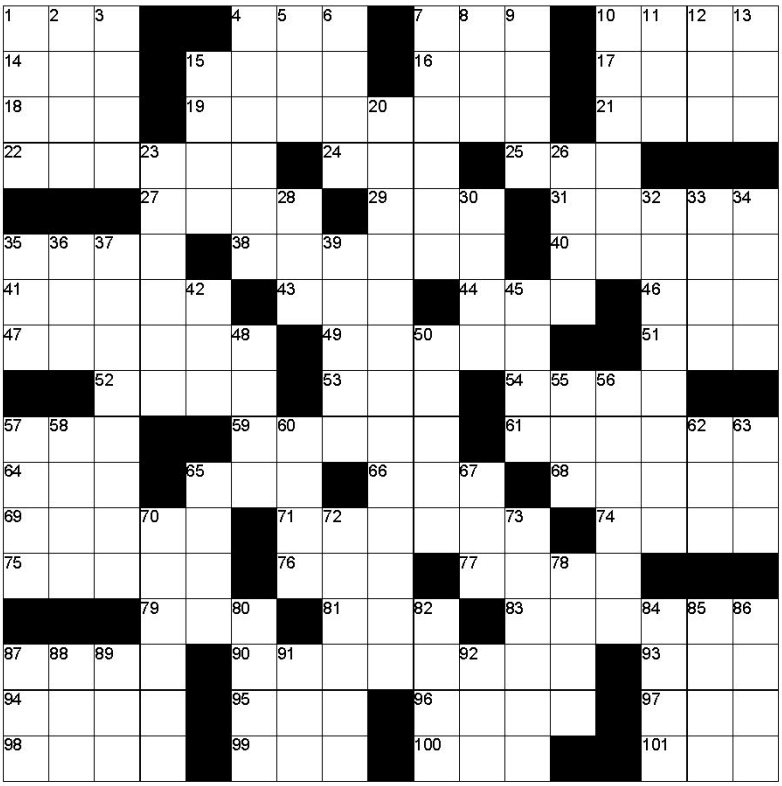
ABOUT THE AUTHOR *Dr. Paul Brandt is the Chair at the Department of Chemistry and Physics at North Central College in Naperville, Ill. He enjoys writing Chemistry Shorts for Kids for the ACS Chicago Section's newsletter. ChemShorts used with permission by the author.*

CROSSWORD PUZZLE APPETIZING ELEMENTAL ANAGRAMS

ABOUT THE AUTHOR *Robert Pike is a professor of chemistry at The College of William & Mary. He is an inorganic chemist with interests in Materials for Sensors and Catalysts, Metal-Organic Networks Chemistry, X-Ray Crystallography, and Chemistry Education, in addition to creating crossword puzzles. Crossword used with permission by the author.*

Appetizing Elemental Anagrams

Robert D. Pike



ACROSS

1. Pre-streaming music purchases
4. Firm name abbrev.
7. Electric guitar need
10. Big hauler rig
14. Oliver Sacks' "The Man Who Mistook His Wife for a ____"
15. World's largest technical society, abbrev.
16. Pod vegetable
17. Genesis locale
18. See 93 across
19. Air-travel alternative
21. Breathing organ
22. With 56 down: Bacon crinkle?
24. Harbor guide boat
25. Feeling down
27. Star Wars Episode IV: ____ Hope
29. Golfball pedestal
31. Benefactor
35. Nicholas II or Alexander III
38. Half of a tradional wedding vow couplet
40. Kind of acid
41. Foundation
43. Revolutionary Guevara
44. Wearable crystal
46. Cobb and others
47. Alternative to virtual
49. With 78 down: Dragon ale?
51. Prescriptions, abbrev.
52. Firearm consumables
53. ____ tree falls in the forest...
54. Short term for a big reptile
57. Ingest comestibles
59. With 83 across: Heirloom bun?
61. Hester Prynne's "A" for instance
64. Top movie list-making org.
65. Bill and ____
66. Common video display color scheme
68. Vast water expanse
69. Duncan or Koufax
71. Washer or draft beverage
74. 1890 massacre site, Wounded ____
75. These can obscure your view of the forest
76. Prefix meaning over, near, at, before, or after
77. Prefix with marketer or prompter
79. Cash machine
81. Hub nut
83. See 59 across
87. Take to heart
90. Narcissism
93. With 18 across, Frozen potatoes brand
94. Phenyl group, for instance
95. Smaller version of 68 across
96. The serfs' boss
97. The middle third of North America
98. "50 Shades" color
99. Turf
100. Poetic term for before
101. Standardized test for the college-bound

DOWN

1. The height of fashion
2. Outrageous early 20th century art movement
3. Element foundry
4. Not quite a ringer
5. Floral aloha
6. Iron-age British Isles inhabitant
7. Most distant point in an orbit
8. ____ culpa
9. Launch locales
10. Never? Hardly ever!
11. Part of a college web address
12. In the 80's they were at work or without hats
13. Present participle ending
15. With 23 down, Nairobi rum?
20. Frothier durum?
23. See 15 down
26. Inhabitant of 17 across
28. Govt. nutrition program for families
30. Therefore, Latin-style
32. With 37 down, Entertaining oats?
33. Smooth black stone
34. The tallest of the "Friends"
35. I'll write this clue later
36. An alveolus, for instance
37. See 32 down
39. Academic department head
42. Famous patriotic uncle
45. "All's Well that ____ Well"
48. Grey wolf
50. Scorsese film "____ of New York"
55. O.J. trial judge
56. See 22 across
57. The only compass direction not found in a state name
58. Some distance away, poetically
60. It follows the cab that follows the train
62. 20th century film comedienne West
63. Saturated hydrocarbon ending
65. Fluid-filled growth
67. Wager
70. Like the king cobra or anthrax virus
72. Import software
73. On-board again
78. See 49 across
80. Army chow hall
82. Dorothy's ironic surname
84. Promissory notes
85. Star-bear
86. Vegetarian's avoidance
87. Witch on a bad hair day
88. To do this is human
89. ____ of newt
91. Earth prefix
92. Neither one

FIND THE SOLUTION

WWW.ACSRICHLAND.ORG/NEWS