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## FEATURE

### A Twofold Celebration in October: Outstanding Members and Marvelous Metals

Happy National Chemistry Week (NCW), the annual celebration of the importance of chemistry in everyday life! This year NCW is part of two exciting weeks for chemistry, following last week's award of the [Nobel Prize in Chemistry](#) to three scientists for their work with lithium-ion batteries. In a statement, ACS President Bonnie Charpentier congratulated the new Nobel laureates (all of whom are long-time ACS Members) and commended their work for enabling "unprecedented advances in communication, transportation and other tools to support critical aspects of life around the world."



Fittingly, this year's NCW theme, "[Marvelous Metals](#)," ties in with the work of the [Nobel laureates](#), since lithium is an alkali metal. In fact, Celebrating Chemistry, one of the free NCW resources, features an interview with [freshly minted laureate Dr. Stanley Whittingham](#), Distinguished Professor of Chemistry and Materials Science & Engineering at SUNY Binghamton, and inventor of lithium batteries. You can find links to Celebrating Chemistry and many other NCW resources and events on the [NCW homepage](#). Don't miss out on this year's annual celebration of chemistry!

## MY ELEMENT



It seems entirely appropriate that today's favorite element is **gold**, submitted by Laroussi Chaabane, since we're celebrating "Marvelous Metals" for NCW 2019: "(Gold) was among the first metals to be mined because it commonly occurs in its native form, that is, not combined with other elements, because it is beautiful and imperishable, and because exquisite objects can be made from it. Additionally, it is called a 'noble' metal..." [read](#)

[more](#)

What's your favorite element? [Share your story today!](#)

## ADVANCE YOURSELF & YOUR SCIENCE

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### Become a U.S. National Chemistry Olympiad Mentor

The U.S. National Chemistry Olympiad (USNCO) is searching for college chemistry educators to serve as mentors for the 2021-2023 USNCO. Mentors play a vital role in preparing students for the International Chemistry Olympiad competition. They help guide students on the national level through a series of preparatory problems to test the students' skills and ultimately select the U.S. team for the international competition. For more information about becoming a mentor and to apply, visit the [USNCO site today!](#)



### Save Your Spot for the Innovation in Materials Science & Technology Symposium in Singapore



Don't miss your opportunity to learn alongside world-renowned scientists at the ACS Publications Symposium, "Innovation in Materials Science & Technology," November 17-19, 2019, in Singapore. The symposium will feature three days of scientific lectures, opportunities to network with editors from across nine ACS Publications journals, and an exciting poster session. Get [full details](#) on the symposium website and [register today!](#)

### Free Webinar on October 24: New Methods for Treating Diabetes

Since the early clinical findings in the late 1980s of using glucagon like peptide-1 (GLP-1) to regulate blood glucose levels, there has been increasing interest in discovering and developing GLP-1 receptor agonists for treatment of type 2 diabetes. This interest is the impetus for the next ACS Webinar, "Treating Diabetes: Designing the Once-Weekly and Oral GLP-1 Semaglutide," on Thursday, October 24, 2:00-3:00 PM ET. Join [Jesper Lau](#), Vice President of Research Chemistry at Novo Nordisk A/S, for this [free, interactive broadcast](#) in which he'll describe how to tailor pharmacokinetic and pharmacodynamic properties of an inherent short action GLP-1 peptide to fit for once-weekly dosing.



## ACS CAREER NAVIGATOR

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### Bridge the Gap: Chemical Engineering for Chemists



Learn the [basics of chemical engineering](#) to help bridge the gap between the research lab and the chemical plant. Get an overview on material and energy balancing, understand practical and timely concepts on chemical reactor design, reaction systems, and chemical process economics, and get a deep dive on process details and integration. Learn skills from communication to problem solving, and how to recognize more advanced chemical engineering problems and solutions. Join us in Houston, TX, on November 4-5, for this essential learning. [Register today!](#)

### Career Corner

## Ask an Expert: "Lots of people say, 'Find your strengths.' Okay, how do I do that?"

### **Moji Bonakdar, Senior Director, Chemical Medicines**

"Ask trusted people about your strengths and weaknesses. Leverage your strengths by offering to help others to develop their strengths." [read more](#)



### **Greglynn Gibbs, ACS Career Consultant**

"Is it finding your strengths, or is it realizing what you're good at? Either way it takes a bit of self-evaluation and external feedback on what it is that you do well. Self-evaluation can be as simple as making a list of tasks you do or don't do well; making a list of successes and failures; or making a list of things you like or dislike. External feedback can include asking colleagues where they feel you are strongest or weakest, or tracking what you have done at work that has resulted in praise or recognition." [read more](#)



### **Lori Spangler, ACS Career Consultant**

"I would reflect on the times at work when you become totally engaged in what you are doing, when time flies by. You may have been utilizing your strengths at that time. Other questions for reflection include: When are you having fun at work? What kinds of things do people ask you to help them with? What are you praised for, by managers and teammates? Finally, there are books/quizzes (for example, Strengthsfinder) that can help you identify your strengths." [read more](#)



### **Chris Bannochie, ACS Career Consultant**

"There are many survey tools to help one phase out their strengths and weaknesses, communication styles, etc. Focus on improving your strengths and not your weaknesses, unless the weakness is a critical flaw that diminishes your productivity." [read more](#)



### **What I Learned: John Finley, Adjunct Professor, School of Nutrition and Food Sciences, Agricultural Center at Louisiana State University**

"I do not believe it makes sense to pay the premium price for organic fruits and vegetables. Organic products are mostly devoid of low levels of herbicides and pesticides, however in conventional products the residue levels are very low. Many organic products have slightly higher levels of antioxidant phenolic compounds, but the levels are likely not enough higher to render measurable health benefits..." [read more](#)

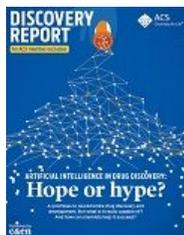


#### **C&EN Jobs - Latest Postings**

**c&en** JOBS

- [Undergraduate Laboratory Faculty Position in Chemical Engineering | University of Rochester | Rochester, NY](#)
- [Teaching Faculty | Florida State University | Tallahassee, FL](#)
- [Associate or Full Professor in Experimental Quantum Information Science | University of Waterloo | Waterloo, ON](#)
- [Tenure-Track faculty in Particular Protein Biochemistry, Structural Biology and Glycoscience | Institute of Biological Chemistry Academia Sinica | Taiwan](#)

## Just Released Discovery Report—Artificial Intelligence in Drug Discovery: Hope or Hype?



At the world's pharma and biotech companies, artificial intelligence (AI) is increasingly critical to the drug discovery engine. A 2019 survey by the Pistoia Alliance found that 70% of life science researchers use AI, including machine and deep learning, up from 44% just two years earlier. But where along the road to a new drug will AI have the most impact? In this [just-released Discovery Report](#), *C&EN* examines the hope and the hype—and what scientists need to know to understand

what's next.

## WCC Rising Star Award Winners Announced

The ACS Women Chemists Committee (WCC) has named the recipients of its 2020 [WCC Rising Star Awards](#), which recognize exceptional early- to midcareer women chemists across all areas of chemistry on a national level. The award was established in 2011 to help promote retention of women in science. The 2020 winners are:



- Christine Aikens, Kansas State University
- Anne K. Bentley, Lewis & Clark College
- Kayla N. Green, Texas Christian University
- Amy C. Hart, Bristol-Myers Squibb
- Leslie M. Hicks, University of North Carolina at Chapel Hill
- Katherine L. Hull, Aramco Research Center - Houston
- Ayanna Jackson, Corteva Agriscience
- Corinne Lipscomb, 3M Company
- Susan Odom, University of Kentucky
- Mou Paul, Dow

Award winners will receive a stipend to cover travel expenses to an award symposium to highlight their work at the [ACS Spring 2020 National Meeting & Exposition](#) in Philadelphia. The WCC serves the ACS membership with its mission to be leaders in attracting, retaining, developing, promoting, and advocating for women in the chemical sciences.

## ACS 2019 National Elections are Still Open - Check Your E-mail and Vote!



Balloting opened on September 30 for the [2019 ACS National Election](#), to select President-Elect 2020, two Directors-at-Large, and Directors for Districts II and IV. Your vote speaks for you, yet fewer than 11% of eligible ACS Members actually cast ballots in ACS national elections. *Does almost 90% of the ACS membership actually have nothing to say about the leadership of their professional society?*

Check your e-mail for your ballot from the "ACS Election Coordinator" (at [noreply@directvote.net](mailto:noreply@directvote.net)). You can find candidate statements, websites, and videos posted on the [ACS National Election Information](#) page. Information on how to vote online or by paper ballot, how to order a replacement ballot, and technical support will be posted on [www.acs.org/elections](http://www.acs.org/elections) during the balloting period. For more information, visit [www.acs.org/elections](http://www.acs.org/elections), or send e-mail to [nomelect@acs.org](mailto:nomelect@acs.org).

## Free Workshop on Advances, Challenges, and Opportunities for Electrochemistry

Please join the Chemical Sciences Roundtable for a workshop on "Advances, Challenges, and Long-Term Opportunities of Electrochemistry: Addressing

**Societal Needs**" on November 18-19, 2019. Participants can join online or in person at the National Academy of Sciences Building in Washington, DC. More information about the program and free registration is available [online](#).



### ACS Pittcon 2020 Travel Award



Applications are now being accepted from early-career chemists from Central and Southern Africa to win a [travel award to attend Pittcon 2020](#) in Chicago, IL, March 1-5, 2020. Applicants don't need to be currently residing in their country of origin to be eligible; citizens of target countries who are serving as visiting scholars or in other capacities within the U.S. are especially encouraged to apply. The deadline for applications is November 10; please [visit the award homepage](#) for more information and to access the application.

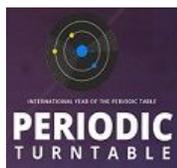
### ACS in the News: *The Washington Post*

"Nobel Prize in Chemistry awarded for rechargeable lithium-ion batteries" (from *The Washington Post*, October 9, 2019)



"Batteries doubled their energy potential because of the cobalt oxide — an insight 'that was really outside the box at the time,' said Bonnie A. Charpentier, president of the American Chemical Society.... 'The beauty of it is they built on each other's work to solve problems that really needed solving,' Charpentier said."

### Big Iron and More on the #PeriodicTurnTable



Did you know that 2003's "Big Iron" by Johnny Cash was first recorded by country singer Marty Robbins in 1959? The song is about an Arizona Ranger coming to a small town to take down an outlaw, using the "big iron" on his hip. Check out this and other element-themed songs & artists on the Periodic TurnTable playlist on [Spotify](#). What did we miss? Let us know on the [#IYPT2019 Periodic Turntable homepage!](#)

### Explore the World with Betchart Expeditions!

Stimulate your mind and refresh your spirit by joining [Betchart Expeditions](#) on unique journeys across the globe with like-minded travelers and scientific experts who share a love of learning, discovery, and adventure. Each expedition offers rich and varied itineraries to satisfy a range of interests. Betchart experts and local guides will provide a truly once-in-a-lifetime experience. Go to [www.betchartexpeditions.com](#) to see what's planned for the rest of 2019 and on the horizon for 2020, or call 1 (800) 252-4910 for more information.



### C&EN - This Week's Headlines

- [C&EN, Table of Contents, October 21 issue](#)
- [The sugar wars are about to change your food label. Here's why](#)
- [Swarms of microrobots show there is power in numbers](#)



- Major in chemistry? Physics? Nah. With these programs, students can major in "science"
- Video: Cremation, burial, or composting? Calculating the environmental costs of the afterlife
- Research on research gains steam
- To find rapists, Candice Bridge examines what condoms leave behind
- A protein in the brain may link smoking and diabetes
- Newly discovered enzyme adds iodine to diverse substrates
- Europe seeks to lead on green hydrogen
- New rule for lead in drinking water may reduce U.S. public health protection

## PHUN & GAMES

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### Chemists Share Scientific Secrets to Enchantment



Although we try to be careful not to equate chemistry with "magic," we're pretty impressed with a couple of [Harry Potter-themed chemistry outreach programs](#) described in *C&EN* this week - one created by Rebecca Lai at the University of Nebraska-Lincoln, the other by Debbie Gale Mitchell at the University of Denver. As we celebrate National Chemistry Week and think about creative ways to engage the public, and especially students, with chemistry topics, we really have to tip our Sorting Hat to these dedicated professors for the clever and detailed ways they [wove real chemistry activities together with the magical saga!](#)

*Image credit: University of Nebraska-Lincoln*

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