

Press Release

American Chemical Society
Office of Public Affairs



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***EMBARGOED FOR RELEASE: Wednesday, August 13, 2013, 2:30 p.m.
Eastern Time***

Press Conference Schedule **248th American Chemical Society National Meeting & Exposition** **August 10-14, 2014**

ACS Press Center
Moscone Center, North, Room 113
Press Center Phone: 415-978-3506

**Attend in person in San Francisco
or watch online:**

www.ustream.tv/channel/acslive

Embargoed press releases are available on EurekAlert! (www.eurekalert.org/acsmmeet.php) and Newswise (www.newswise.com/institutions/newsroom/7)

Note to journalists: Please report that this research is being presented at a meeting of the American Chemical Society.

Monday, Aug. 11

9 a.m. Pacific Time

Toyota to market hydrogen vehicles in 2015; Linde starts small-series production of fueling stations

FOR IMMEDIATE RELEASE

The Toyota Highlander fuel-cell electric vehicle, which debuts in 2015, will be on display here at the American Chemical Society's 248th National Meeting & Exposition. To make commercialization of such zero-emission hydrogen fuel-cell vehicles more feasible, Toyota has cut costs by 90 percent and German industrial gases and engineering company Linde AG will start small-series production of hydrogen fueling stations. The head of Linde's U.S. hydrogen fueling team, along with nationally recognized chemical engineers, will discuss this transportation advance during a press conference.

Michael Beckman
Linde North America, Inc.

Amanda Morris, Ph.D.
Virginia Polytechnic and State University

Chulsung Bae, Ph.D.
Rensselaer Polytechnic Institute

9:30 a.m. Pacific Time

'Heroes of Chemistry' developed products that improve health, electronics, plastics

FOR IMMEDIATE RELEASE

Scientists who developed products that improve health, as well as materials for plastics and electronics, will be inducted into a scientific "Hall of Fame" today, becoming the newest Heroes of Chemistry, an honor bestowed by the American Chemical Society, the world's largest scientific society.

Hiroshi Shirai
Asahi Kasei Chemicals Corporation

Florian Schattenmann
Dow Chemical

Simon Bailey
Pfizer Inc.

Michael Lawrence
BMS/Aegerion

10:30 a.m. Pacific Time

The grass really is greener on TV and computer screens, thanks to quantum dots

FOR IMMEDIATE RELEASE

High-tech specks called quantum dots could bring brighter, more vibrant color to mass market TVs, tablets, phones and other displays. Today, a scientist will describe a new technology called 3M quantum dot enhancement film that efficiently makes liquid crystal display screens more richly colored.

Eric W. Nelson, Ph.D.
3M Company

11 a.m. Pacific Time

Solving a sticky problem with fetal surgery using a glue inspired by the sandcastle worm

EMBARGOED FOR RELEASE: Monday, Aug. 11, 2014, 5 a.m. Eastern Time

In creating an adhesive patterned after glue produced by the lowly underwater sandcastle worm, researchers are reporting today that they may have solved the problem of premature births that sometimes result from fetal surgery. It also could open up numerous opportunities to safely perform more complex fetal surgeries in the future.

Russell J. Stewart, Ph.D.
University of Utah

1 p.m. Pacific Time

How science sizzles in the modern kitchen

FOR IMMEDIATE RELEASE

Some of the world's finest chemists don't wear lab coats. Instead, they don aprons and toques, and masterfully meld their passion for cooking with a growing awareness of the science behind the culinary arts. The results are driving an extraordinary expansion of our cuisine and transforming ordinary meals into fabulous feasts. That's according to a group of prominent chefs, authors and culinary educators.

Guy Crosby, Ph.D.
Co-author of *The Science of Good Cooking* and symposium organizer

Jeff Potter
Author of *Cooking for Geeks*

Ali Bouzari, Ph.D.
Culinary scientist and consultant

Christopher Loss, Ph.D.
Culinary Institute of America

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#14-128

Released: 08/14/2014

2 p.m. Pacific Time

Innovations with far-reaching potential for the environment and health

EMBARGOED FOR RELEASE: Monday, Aug. 11, 2014, 5 a.m. Eastern Time

The Kavli Foundation Lecture series today features two prominent scientists: one in the booming area of ionic liquids, the other in medical materials. The former has made a novel compound with the potential to lower the energy it takes to capture carbon dioxide from smoke stacks. The latter has engineered tissues and medical materials such as a stretchy glue that could transform surgery.

Joan Brennecke, Ph.D.
University of Notre Dame

Ali Khademhosseini, Ph.D.
Brigham and Women's Hospital and Harvard Medical School

3 p.m. Pacific Time

Carbon dioxide 'sponge' could ease transition to cleaner energy

EMBARGOED FOR RELEASE: Sunday, Aug. 10, 2014, 5 a.m. Eastern Time

A sponge-like plastic that sops up the greenhouse gas carbon dioxide (CO₂) might ease our transition away from polluting fossil fuels and toward new energy sources, such as hydrogen. The material — a relative of the plastics used in food containers — could play a role in President Obama's plan to cut CO₂ emissions 30 percent by 2030, and could also be integrated into power plant smokestacks in the future.

Andrew I. Cooper, Ph.D.
University of Liverpool

Tuesday, Aug. 12

9 a.m. Pacific Time

Scarcity of elements in products like smartphones needs addressing, say scientists

FOR IMMEDIATE RELEASE

Many of today's technological innovations from the iPhone to electric motors for hybrid cars require the use of materials — elements — that are scarce or difficult to obtain. As demand for these devices grows, the problem of dwindling critical element supplies must be addressed. That's the conclusion of a white paper written by eminent scientists.

Stephen Thomas, Ph.D.
Royal Society of Chemistry and University of Edinburgh

Wolfram Koch
German Chemical Society

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Susannah Scott, Ph.D.
American Chemical Society and University of California, Santa Barbara

Nobuyuki Kawashima
Chemical Society of Japan

Xi Zhang, Ph.D.
Chinese Chemical Society and Tsinghua University

10:30 a.m. Pacific Time

Could hemp nanosheets topple graphene for making the ideal supercapacitor?

EMBARGOED FOR RELEASE: Tuesday, Aug. 12, 2014, 5 a.m. Eastern Time

As hemp makes a comeback in the U.S. after a decades-long ban on its cultivation, scientists are reporting that fibers from the plant can pack as much energy and power as graphene, long-touted as the model material for supercapacitors.

David Mitlin, Ph.D.
Clarkson University

11:30 a.m. Pacific Time

Sniffing out billions in U.S. currency smuggled across the border to Mexico

EMBARGOED FOR RELEASE: Tuesday, Aug. 12, 2014, 5 a.m. Eastern Time

Criminals are smuggling an estimated \$30 billion in U.S. currency into Mexico each year from the United States, but help could be on the way for border guards, researchers will report here today. The answer to the problem: a portable device that identifies specific vapors given off by U.S. paper money.

Joseph R. Stetter, Ph.D.
Suiqiong Li, Ph.D.
KWJ Engineering, Inc.

1:30 p.m. Pacific Time

Keeping filler ingredients out of your cup of coffee

EMBARGOED FOR RELEASE: Monday, Aug. 11, 2014, 5 a.m. Eastern time

Coffee drinkers beware: Surprise ingredients that are neither sweet nor flavorful may be hiding in your coffee, and growing coffee shortages may increase the chance of having these fillers in your cup of joe in the future. The good news is that a highly accurate test is in the works to quickly find coffee containing unwanted fillers before the beverage reaches stores and restaurants.

Suzana Lucy Nixdorf, Ph.D.
State University of Londrina

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Pregnant women and fetuses exposed to antibacterial compounds face potential health risks

EMBARGOED FOR RELEASE: Sunday, Aug. 10, 2014, 5 a.m. Eastern Time

As the Food and Drug Administration mulls over whether to rein in the use of common antibacterial compounds that are causing growing concern among environmental health experts, scientists are reporting today that many pregnant women and their fetuses are being exposed to these substances.

Rolf Halden, Ph.D., P.E.
Arizona State University

3 p.m. Pacific Time

Wine symposium explores everything you wanted to know about the mighty grape (video)

EMBARGOED FOR RELEASE: Sunday, Aug. 10, 2014, 5 a.m. Eastern Time

Location. Location. Location. The popular real estate mantra also turns out to be equally important for growing wine grapes in fields and storing bottles of the beverage at home or in restaurants, according to researchers. Those are just two of the many scientific subjects that will be covered in a symposium titled, "Advances in Wine Research." A brand-new ACS video on the topics is available at <https://www.youtube.com/watch?v=Km3UujrPLEU>.

Susan Ebeler, Ph.D.
University of California, Davis

Fulvio Mattivi
Fondazione Edmund Mach, Research and Innovation Centre

4 p.m. Pacific Time

Venom gets good buzz as potential cancer-fighter (video)

EMBARGOED FOR RELEASE: Monday, Aug. 11, 2014, 5 a.m. Eastern Time

Bee, snake or scorpion venom could form the basis of a new generation of cancer-fighting drugs, scientists will report here today. They have devised a method for targeting venom proteins specifically to malignant cells while sparing healthy ones, which reduces or eliminates side effects that the toxins would otherwise cause. A brand-new video on the research is available at <http://www.youtube.com/watch?v=GRsUi5UrH7k&feature=youtu.be>.

Dipanjan Pan, Ph.D.
University of Illinois at Urbana-Champaign

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9 a.m. Pacific Time

‘Shape-shifting’ material could help reconstruct faces

EMBARGOED FOR RELEASE: Wednesday, Aug. 13, 2014, 5 a.m. Eastern Time

Injuries, birth defects (such as cleft palates) or surgery to remove a tumor can create gaps in bone that are too large to heal naturally. And when they occur in the head, face or jaw, these bone defects can dramatically alter a person’s appearance. Researchers will report today that they have developed a “self-fitting” material that expands with warm salt water to precisely fill bone defects, and also acts as a scaffold for new bone growth.

Melissa Grunlan, Ph.D.
Texas A&M University

11 a.m. Pacific Time

Tattoo biobatteries produce power from sweat (video)

EMBARGOED FOR RELEASE: Wednesday, Aug. 13, 2014, 5 a.m. Eastern Time

In the future, working up a sweat by exercising may not only be good for your health, but it could also power your small electronic devices. Researchers will report today that they have designed a sensor in the form of a temporary tattoo that can both monitor a person’s progress during exercise and produce power from their perspiration. A brand-new video on the research is available at http://www.youtube.com/watch?v=3_D7JOd07M8&feature=youtu.be.

Wenzhao Jia, Ph.D.
University of California, San Diego

1 p.m. Pacific Time

A new look at what’s in ‘fracking’ fluids raises red flags

EMBARGOED FOR RELEASE: Wednesday, Aug. 13, 2014, 5 a.m. Eastern Time

As the oil and gas drilling technique called hydraulic fracturing (or “fracking”) proliferates, a new study on the contents of the fluids involved in the process raises concerns about several ingredients. The scientists say that out of nearly 200 commonly used compounds, there’s very little known about the potential health risks of about one-third, and eight are toxic to mammals.

William Stringfellow, Ph.D.
Lawrence Berkeley National Laboratory and University of the Pacific

2 p.m. Pacific Time

Dust — and the microbes hitching rides on it — influences rain, climate

EMBARGOED FOR RELEASE: Wednesday, Aug. 13, 2014, 5 a.m. Eastern Time

Dusty air blowing across the Pacific from Asia and Africa plays a critical role in precipitation patterns throughout the drought-stricken western U.S. Today, a scientist will present new research suggesting that the exact chemical make-up of that dust, including microbes found in it, is the key to how much rain and snow falls from clouds throughout the region. This information could help better predict rain events, as well as explain how air pollution from a variety of sources influences regional climate in general.

Kim Prather, Ph.D.
University of California, San Diego

2:30 p.m. Pacific Time

Rooting out skin creams that contain toxic mercury

EMBARGOED FOR RELEASE: Wednesday, Aug. 13, 2014, 5 a.m. Eastern Time

As countries try to rid themselves of toxic mercury pollution, some people are slathering and even injecting creams containing the metal onto or under their skin to lighten it, putting themselves and others at risk for serious health problems. To find those most at risk, scientists are reporting today that they can now identify these creams and intervene much faster than before.

Gordon Vrdoljak, Ph.D.
California Department of Public Health

The American Chemical Society is a nonprofit organization chartered by the U.S. Congress. With more than 161,000 members, ACS is the world's largest scientific society and a global leader in providing access to chemistry-related research through its multiple databases, peer-reviewed journals and scientific conferences. Its main offices are in Washington, D.C., and Columbus, Ohio.

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