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| http://images.magnetmail.net/images/template/acs/gold.gif In This Edition  |  | | --- | | [The first caffeine-‘addicted’ bacteria](#1)  [Ultrafine particles raise concerns about improved cookstoves](#ARTICLE_2)  [New test for skin sensitization without using animals](#3)  [No clear evidence that an increased level of gluten proteins in new wheat varieties is responsible for increase in celiac disease](#4)  [The hunt for a successor to lithium for bipolar disorder](#5) |  |  | | --- | | [**Journalists’ Resources:**](#Resources)  [About the Weekly PressPac](#About)  [News media registration for ACS’ 245th National Meeting & Exposition in New Orleans](#press)  [Press releases, briefings and more from ACS’ 244th National Meeting](#registration)[Inside Science News Service](#InsideScience)  [C&EN Video Spotlight: Crowdsourcing and Open Science to Check Chemical Reaction](#VideoSpotlight)  [Must-Read from C&EN: Increased Ocean Acidity Has Real-World Impact](#mustread)  [ACS Pressroom Blog](#pressroomblog)   [Bytesize ScienceBlog](#bytesizeblog)  [ACS Satellite Pressroom: Daily news blasts on Twitter](#twitter) [C&EN on Twitter](#CENTwitter)  [ACS Press Releases](#releases) |  |  | | --- | | [**ACS Videos:**](#Videos) [Spellbound: A video series on how kids became scientists](#Spellbound)  [Prized Science video series](#Dance)  [The Periodic Table Table Featuring Theo Gray](#Mars)  [Healing the voice: Synthetic vocal cords](#daywithoutchemistry)  [The Chemistry of Beer](#Beer)  [The Chemistry of Cheese](#Cheese)  [Without a Scratch: Self-Healing Materials](#Scratch) |  |  | | --- | | [**ACS Podcasts:**](#podcasts)     [Bytesize Science: A podcast for young listeners](#globalchallenges)  [Global Challenges/Chemistry Solutions](#Bytesizescience)    [Science Elements: From the PressPac](#Scienceelements) |  |  | | --- | | [**And Don't Miss:**](#dontmiss)  [Chemistry Glossary](#glossary) |   [PressPac Archives](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344068&m=2540722&u=ACS&j=13545448&s=http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_PRESSPACS&node_id=223&use_sec=false&sec_url_var=region1&__uuid=a0c923e3-c385-4d96-bdc8-eadaa07eb02f) | **ACS NEWS SERVICE Weekly Press Package - March 27, 2013   ALL CONTENT IS FOR IMMEDIATE RELEASE  Please credit the individual journal or the American Chemical Society as the source for this information.**  Here is the latest American Chemical Society (ACS) Weekly PressPac from the Office of Public Affairs. It has news from ACS’ more than 40 peer-reviewed journals and Chemical & Engineering News.  Science Inquiries: Michael Woods, editor [m\_woods@acs.org](mailto:m_woods@acs.org) 202-872-6293  General Inquiries: Michael Bernstein [m\_bernstein@acs.org](mailto:m_bernstein@acs.org)  202-872-6042  Follow us: [http://images.magnetmail.net/images/clients/ACS/Twitter1(1).png](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344069&m=2540722&u=ACS&j=13545448&s=https://twitter.com/ACSpressroom)  [http://images.magnetmail.net/images/clients/ACS/Facebook.jpg](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344070&m=2540722&u=ACS&j=13545448&s=https://www.facebook.com/pages/American-Chemical-Society-Press-Room/130342583687829)  ARTICLE #1 **FOR IMMEDIATE RELEASE**  **The first caffeine-‘addicted’ bacteria** ACS Synthetic Biology   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/032013coffeethumb.jpg Genetically engineered bacteria are “addicted” to caffeine in a way that promises practical uses ranging from decontamination of wastewater to bioproduction of medications for asthma. Credit: iStockphoto/Thinkstock |   Some people may joke about living on caffeine, but scientists now have genetically engineered E. coli bacteria to do that — literally. Their report in the journal ACS Synthetic Biology describes bacteria being “addicted” to caffeine in a way that promises practical uses ranging from decontamination of wastewater to bioproduction of medications for asthma.  Jeffrey E. Barrick and colleagues note that caffeine and related chemical compounds have become important water pollutants due to widespread use in coffee, soda pop, tea, energy drinks, chocolate and certain medications. These include prescription drugs for asthma and other lung diseases. The scientists knew that a natural soil bacterium, Pseudomonas putida CBB5, can actually live solely on caffeine and could be used to clean up such environmental contamination. So they set out to transfer genetic gear for metabolizing, or breaking down, caffeine from P. putida into that old workhorse of biotechnology, E. coli, which is easy to handle and grow.  The study reports their success in doing so, as well as use of the E. coli for decaffeination and measuring the caffeine content of beverages. It describes development of a synthetic packet of genes for breaking down caffeine and related compounds that can be moved easily to other microbes. When engineered into certain E. coli, the result was bacteria literally addicted to caffeine. The genetic packet could have applications beyond environmental remediation, the scientists say, citing potential use as a sensor to measure caffeine levels in beverages, in recovery of nutrient-rich byproducts of coffee processing and for the cost-effective bioproduction of medicines.  The author and co-authors acknowledge financial support from the [University of Texas at Austin](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344071&m=2540722&u=ACS&j=13545448&s=https://www.utexas.edu/) and the [University of Iowa](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344072&m=2540722&u=ACS&j=13545448&s=http://www.uiowa.edu/).   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/032713acssynthumb.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344073&m=2540722&u=ACS&j=13545448&s=http://web.1.c2.audiovideoweb.com/1c2web3536/032713acssynhires.jpg) for high-resolution image |   ARTICLE #1 **FOR IMMEDIATE RELEASE** “Decaffeination and Measurement of Caffeine Content by Addicted Escherichia coli with a Refactored N-Demethylation Operon from Pseudomonas putida CBB5”  [DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344074&m=2540722&u=ACS&j=13545448&s=http://pubs.acs.org/stoken/presspac/presspac/abs/10.1021/sb4000146%20)   CONTACT: Jeffrey E. Barrick, Ph.D. University of Texas at Austin Austin, Texas 78712 Phone: 512-471-3247 Email: [jbarrick@cm.utexas.edu](mailto:jbarrick@cm.utexas.edu)  [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif  ARTICLE #2 **FOR IMMEDIATE RELEASE**  **Ultrafine particles raise concerns about improved cookstoves** Environmental Science & Technology   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/030213cookstovethumb.jpg International aid agencies are replacing open-fire cooking in developing countries with “improved cookstoves,” but a study raises concerns for possible health impacts of very small particles of soot from the new models.Credit: American Chemical Society |   A new study raises concerns about possible health impacts of very small particles of soot released from the “improved cookstoves” that international aid agencies are promoting to replace open-fire cooking in developing countries. It appears in the ACS journal Environmental Science & Technology.  Brian Just and colleagues point out that 3 billion people worldwide still cook meals on stoves or open fires that burn wood, animal dung or other biomass fuel. These fires, which sometimes are indoors, release air pollutants linked to 3.5 million deaths annually. Soot, or so-called “black carbon" (BC), released in the smoke also is a factor in global warming. In an effort to remedy the situation, aid agencies plan the distribution of 100 million new, clean-burning cookstoves during the next 10 years. Concerns have arisen, however, about pollutants released by the stoves. Just’s team focused on emissions of ultrafine soot particles linked to some of the most serious health problems.  They describe laboratory tests comparing two styles of improved cookstoves to a traditional three-stone open fire burning wood. Improved stoves did release much lower overall levels of soot. However, per quantity of fuel burned, they did not emit significantly smaller amounts of BC, and they produced three times the quantity of worrisome ultrafine particles that can penetrate deep into the lungs compared to the open fire. The tests included only a narrow range of operating conditions, but for these conditions, at least, it appears that new cookstoves are not automatic "fixes" to the health problems associated with cooking activities and that, “Given improved cookstoves’ recent funding and attention, continued improvement in our understanding of emissions and end effects is important,” they say.   The authors acknowledge funding from [the Natural Sciences and Engineering Research Council of Canada (NSERC)](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344075&m=2540722&u=ACS&j=13545448&s=http://www.nserc-crsng.gc.ca/index_eng.asp) under [the Collaborative Research and Training Experience (CREATE) Atmospheric Aerosol Program](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344076&m=2540722&u=ACS&j=13545448&s=http://create-aap.chem.ubc.ca/home/).   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/032713estthumb.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344077&m=2540722&u=ACS&j=13545448&s=http://web.1.c2.audiovideoweb.com/1c2web3536/032713esthires.jpg) for high-resolution image |   ARTICLE #2 **FOR IMMEDIATE RELEASE** “Characterization of Ultrafine Particulate Matter from Traditional and Improved Biomass Cookstoves”  [DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344078&m=2540722&u=ACS&j=13545448&s=http://pubs.acs.org/stoken/presspac/presspac/abs/10.1021/es304351p)  CONTACT: Brian Just Department of Mechanical Engineering The University of British Columbia 6250 Applied Science Lane Vancouver, BC, V6T 1Z4 Canada Phone: 604-822-4149 Email: [bgjust13@gmail.com](mailto:bgjust13@gmail.com)  [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif  ARTICLE #3 **FOR IMMEDIATE RELEASE  New test for skin sensitization without using animals** Chemical Research in Toxicology   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/032013cosmeticsthumb(1).jpg Allergy testing of new cosmetics and other skin-care products may be done with a highly accurate new test that does not involve animals.Credit: Stockbyte/Thinkstock |   In an advance in efforts to reduce the use of animals in testing new cosmetic and other product ingredients for skin allergies, scientists are describing a new, highly accurate non-animal test for these skin-sensitizers. Their study appears in ACS’ journal Chemical Research in Toxicology.  Bruno Miguel Neves and colleagues explain that concerns about the ethics and costs of animal-based tests for skin sensitizers, plus regulations in the European Union, are fostering a search for alternative tests. Testing product ingredients prior to marketing is important, because allergic contact dermatitis is the most prevalent form of immunotoxicity in humans.  The scientists describe development of a cell-based alternative test that enlists genes and signaling pathways in mouse skin cells growing in the laboratory. Exposure to skin sensitizers triggers characteristic responses, activating genes and making cells release substances that communicate with adjacent cells. Evaluation of the test on 18 compounds showed that it had a sensitivity of 92 percent in correctly identifying actual sensitizers. It had a specificity of 100 percent and did not produce any false positive results — indicating that a substance caused sensitization when, in fact, it did not. The approach could be “extremely valuable” in revealing the interaction of skin cells with sensitizers, the scientists say.  The authors acknowledge funding from [Fundação para a Ciência e a Tecnologia (FCT)](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344079&m=2540722&u=ACS&j=13545448&s=http://www.fct.pt/), [Fundo Comunitário Europeu (FEDER)](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344080&m=2540722&u=ACS&j=13545448&s=http://www.picardie-europe.eu/les-programmes-operationnels/feder.html) and [Programa Operacional Factores de Competitividade (COMPETE)](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344081&m=2540722&u=ACS&j=13545448&s=http://www.pofc.qren.pt/).   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/032713chemtoxithumb.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344082&m=2540722&u=ACS&j=13545448&s=http://web.1.c2.audiovideoweb.com/1c2web3536/032713chemtoxihires.jpg) for high-resolution image |   ARTICLE #3 **FOR IMMEDIATE RELEASE** “Development of an in Vitro Dendritic Cell-Based Test for Skin Sensitizer Identification”  [DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344083&m=2540722&u=ACS&j=13545448&s=http://pubs.acs.org/stoken/presspac/presspac/abs/10.1021/tx300472d)   CONTACT: Bruno Miguel Neves, Ph.D. Department of Chemistry Mass Spectrometry Center QOPNA University of Aveiro Campus Universitário de Santiago 3810-193 Aveiro Portugal Phone: 351-234-370-360 Email: [neves\_bruno@sapo.pt](mailto:neves_bruno@sapo.pt)  [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif    ARTICLE #4 **FOR IMMEDIATE RELEASE: A PressPac Instant Replay\***  **No clear evidence that an increased level of gluten proteins in new wheat varieties is responsible for increase in celiac disease** Journal of Agricultural and Food Chemistry   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/020613breadglutenthumb(1).jpg There is no clear evidence that celiac disease is increasing because farmers are growing wheat that contains more gluten.Credit: iStockphoto/Thinkstock |   No clear evidence exists to support the idea that celiac disease is increasing in prevalence because farmers are growing strains of wheat that contain more gluten. That’s the conclusion of an article in the ACS’ Journal of Agricultural and Food Chemistry.  Donald D. Kasarda cites evidence that the incidence of celiac disease increased during the second half of the 20th century. Some estimates indicate that the disease is 4 times more common today. Also known as gluten intolerance, celiac disease occurs when gluten, a protein in wheat, barley and rye, damages the lining of the small intestine, causing a variety of symptoms. Nobody knows why the disease is increasing. One leading explanation suggests that it results from wheat breeding that led to production of wheat varieties containing higher levels of gluten.  Kasarda’s Perspective article examined the scientific evidence for that hypothesis and found that gluten levels in various varieties have changed little on average since the 1920s. Overall gluten consumption, however, has increased due to other factors. One involves increased consumption of a food additive termed “vital gluten,” which has tripled since 1977. Vital gluten is a food additive made from wheat flour, and it is added to various food products to improve their characteristics, such as texture. Overall consumption of wheat flour also has increased, so that people in 2000 consumed 2.9 pounds more gluten annually than in 1970, nearly a 25 percent increase.   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/032713agfoodthumb.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344084&m=2540722&u=ACS&j=13545448&s=http://web.1.c2.audiovideoweb.com/1c2web3536/032713agfoodhires.jpg) for high-resolution image |   ARTICLE #4 **FOR IMMEDIATE RELEASE** “Can an Increase in Celiac Disease Be Attributed to an Increase in the Gluten Content of Wheat as a Consequence of Wheat Breeding?”  [DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344085&m=2540722&u=ACS&j=13545448&s=http://www.mmsend88.com/link.cfm?r=39858672&sid=22534072&m=2477628&u=ACS&j=12976403&s=http://pubs.acs.org/stoken/presspac/presspac/abs/10.1021/jf305122s) CONTACT: Donald D. Kasarda, Ph.D. U.S. Department of Agriculture Agricultural Research Service Western Regional Research Center 800 Buchanan Street Albany, Calif. 94710 Phone: 510-559-5687 Fax: 510-559-5818 Email: [donald.kasarda@ars.usda.gov](mailto:donald.kasarda@ars.usda.gov)  **\*A previous PressPac item that you may have missed**     [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif  ARTICLE #5 **FOR IMMEDIATE RELEASE**  **The hunt for a successor to lithium for bipolar disorder** Chemical & Engineering News   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/032713CEN.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344087&m=2540722&u=ACS&j=13545448&s=http://web.1.c2.audiovideoweb.com/1c2web3536/032713CEN.jpg) for high-resolution image. |   Toxicity problems and adverse side effects when taking lithium, the mainstay medication for treating bipolar disorder, are fostering a scientific hunt for insights into exactly how lithium works in the body — with an eye to developing a safer alternative. That’s the topic of the cover story in the current edition of Chemical & Engineering News. C&EN is the weekly newsmagazine of the American Chemical Society, the world’s largest scientific society.  Bethany Halford, C&EN senior editor, explains that lithium often is the first-line medication used to calm the highs and boost the lows of bipolar disorder, which affects about 9 million people at some point in their lives in the United States alone. Lithium has distinct advantages over the dozen or so other medications. For instance, lithium is the only medication proven effective in preventing suicide in the mania phase of bipolar disorder. Lithium also is inexpensive.  The article explains, however, that lithium also has drawbacks, with a fine line between the effective dose and the toxic dose. Side effects include thyroid problems, weight gain and, in some cases, kidney failure. In the hope of skirting lithium’s limitations, scientists are trying to pinpoint exactly how lithium stabilizes mood and how it engenders those unwanted effects. The goal is development of a second-generation successor without lithium’s downsides, and Halford describes how scientists are working to do so.   ARTICLE #5 **FOR IMMEDIATE RELEASE** "Limits of Lithium"  This story is available at: [http://cenm.ag/lithium](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344088&m=2540722&u=ACS&j=13545448&s=http://cenm.ag/lithium)    [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif    **Journalists’ Resources** **About the Weekly PressPac** The ACS Weekly PressPac consists of summaries of research published in the American Chemical Society’s more than 40 peer-reviewed journals and its weekly newsmagazine, Chemical & Engineering News. ACS journals publish more than 35,000 articles annually. Although not traditional press releases, PressPac content can be used to prepare news stories, in conjunction with the full-text PDF and an interview with the authors. PressPac stories and the accompanying full-text PDFs also can be an excellent resource for features and background.  **News media registration for ACS’ 245th National Meeting & Exposition in New Orleans** News media [registration](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344089&m=2540722&u=ACS&j=13545448&s=https://www.xpressreg.net/register/acsa043/media/reginfo.asp) is now open for the American Chemical Society’s 245th National Meeting & Exposition in New Orleans, April 7-11, 2013. The event will include almost 12,000 reports on new discoveries in medicine and health, food and nutrition, energy, the environment and other fields where chemistry plays a central role. One of the largest scientific conferences of 2013, the meeting will take place at the Ernest N. Morial Convention Center and area hotels.  To view the full news release about meeting registration, [click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344090&m=2540722&u=ACS&j=13545448&s=http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_ARTICLEMAIN&node_id=222&content_id=CNBP_031828&use_sec=true&sec_url_var=region1&__uuid=a563a716-754e-4dda-b033-8128b87b7fb7).  **Press releases, briefings and more from ACS’ 244th National Meeting** [www.eurekalert.org/acsmeet.php](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344091&m=2540722&u=ACS&j=13545448&s=http://www.eurekalert.org/acsmeet.php)  [www.ustream.tv/channel/acslive](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344092&m=2540722&u=ACS&j=13545448&s=http://www.ustream.tv/channel/acslive%20) **Inside Science News Service** For thoroughly enjoyable multimedia coverage of the science behind the news — a valuable resource for journalists and news media organizations everywhere. [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344093&m=2540722&u=ACS&j=13545448&s=http://www.insidescience.org/) to visit the Inside Science News website.  **C&EN Video Spotlight: Crowdsourcing and Open Science to Check Chemical Reaction** What do you get when you combine crowdsourcing, chemistry and the spirit of TV show “America’s Test Kitchen”? You get a new website called Blog Syn. It sprung up in January, with the purpose of checking chemical reactions to determine how reliable they are and reporting the results to chemists around the world. The chemists behind Blog Syn are trying to help with a major chemistry bugaboo — it turns out that published “recipes” for chemical compounds don’t always work the first time they’re tried or work consistently. Blog Syn has some established competition, but as C&EN Senior Editor Carmen Drahl reports, its founders think that their crowdsourcing approach will give them the speed to stake out a niche.  [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344094&m=2540722&u=ACS&j=13545448&s=http://www.youtube.com/watch?v=wJvJAt0RLMk) to view the video.  **Must-Read from C&EN: Increased Ocean Acidity Has Real-World Impact** Increasing ocean acidity linked to global climate change threatens the shellfish industry and the Native American Makah people's livelihood in northwestern Washington State. For the full story, contact [newsroom@acs.org](mailto:newsroom@acs.org).   **ACS Pressroom Blog** The ACS Office of Public Affairs' [pressroom blog](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344095&m=2540722&u=ACS&j=13545448&s=https://communities.acs.org/community/science/science_news) highlights research from ACS’ more than 40 peer-reviewed journals and National Meetings.  **Bytesize Science Blog**  Educators and kids, put on your thinking caps: The American Chemical Society has [a blog for Bytesize Science](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344096&m=2540722&u=ACS&j=13545448&s=http://www.bytesizescience.com), a science podcast for kids of all ages.  **ACS Satellite Pressroom: Daily news blasts on Twitter** The satellite press room has become one of the most popular science news sites on Twitter. To get our news blasts and updates, create a free account at [https://twitter.com/signup](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344097&m=2540722&u=ACS&j=13545448&s=https://twitter.com/signup). Then visit [http://twitter.com/ACSpressroom](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344098&m=2540722&u=ACS&j=13545448&s=http://twitter.com/ACSpressroom) and click the ‘join’ button beneath the press room logo.   **C&EN on Twitter** Follow @cenmag at [http://twitter.com/cenmag](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344099&m=2540722&u=ACS&j=13545448&s=http://twitter.com/cenmag) for the latest news in chemistry and dispatches from C&EN's blog, CENtral Science, at [http://centralscience.org](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344100&m=2540722&u=ACS&j=13545448&s=http://centralscience.org).**ACS Press Releases**  [Press releases](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344101&m=2540722&u=ACS&j=13545448&s=http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_NEWSRELEASES&node_id=222&use_sec=false&sec_url_var=region1&__uuid=50b5ab93-801d-4d0d-868f-b9507ff9d709) on a variety of chemistry-related topics.  [To Top](#top)  http://images.magnetmail.net/images/clients/acs/goldline.gif  **ACS Videos**  The American Chemical Society encourages news organizations, museums, educational organizations and other web sites to embed links to these videos.  **Spellbound: How Kids Became Scientists**   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/Spellbound3.jpg |   The road to a Nobel Prize began for one scientist in elementary school when his father placed a sign on his bedroom door proclaiming him to be a “doctor.” This is just one of the many experiences that helped launch the careers of scientists from diverse backgrounds who are featured in a new ACS video series called [Spellbound: How Kids Became Scientists](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344102&m=2540722&u=ACS&j=13545448&s=http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_ARTICLEMAIN&node_id=1355&content_id=CNBP_028033&use_sec=true&sec_url_var=region1&__uuid=e8e6ee76-0abe-4e78-84c4-3717c995c65e).  **Prized Science video series**   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/2012PrizedScienceLanger.png |   Prized Science: How the Science Behind ACS Awards Impacts Your Life video series is new for 2012! The first episode features the research of Dr. Robert Langer, winner of the 2012 ACS Priestley Medal. He is a professor at the Massachusetts Institute of Technology. The Priestley Medal is the highest honor of the ACS, and it recognizes Langer’s pioneering work making body tissues in the lab by growing cells on special pieces of plastic. Langer’s team has used the approach to make skin for burn patients, for instance, with the goal of eventually making whole organs for transplantation. The second episode features Dr. Chad Mirkin, winner of the 2012 ACS Award for Creative Invention. His research has provided patients with faster diagnoses for influenza and other respiratory infections, and new tests that improve care for heart disease. More episodes will appear later in the year. The series is available at the [Prized Science](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344103&m=2540722&u=ACS&j=13545448&s=http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_ARTICLEMAIN&node_id=446&content_id=CTD1_018821&use_sec=true&sec_url_var=region1&__uuid=594bce97-0b05-4df7-b759-1a0f9156c5d8) website and on [DVD](mailto:m_bernstein@acs.org).  **The Periodic Table Table Featuring Theo Gray**   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/VideoGrayTable_thumb(1).png |   Some people collect stamps. Wolfram Research co-founder and author Theo Gray collects elements. Step into his office, and you'll see a silicon disc engraved with Homer Simpson, a jar of mercury, uranium shells and hundreds of other chemical artifacts. But his real DIY masterpiece is the world's first ["periodic table table."](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344104&m=2540722&u=ACS&j=13545448&s=http://www.bytesizescience.com/index.cfm/2012/2/22/The-Periodic-Table-Table-Featuring-Theo-Gray) Within this masterfully constructed table-top lay samples of nearly every element known to man, minus the super-radioactive ones.  **Healing the voice: Synthetic vocal cords**   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/VideoVocalCords_thumb(2).jpg |   [Synthetic vocal cords](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344105&m=2540722&u=ACS&j=13545448&s=http://www.bytesizescience.com/index.cfm/2012/5/22/Bytesize-Science-Healing-the-voice-with-synthetic-vocal-cords%20) may someday heal the voices of singers like Julie Andrews — whose legendary voice was permanently damaged in a 1997 operation. Filmed in the lab of 2012 ACS Priestley Medalist and MIT Institute Professor Robert Langer, our latest video explains how artificial polymer vocal cords may help repair damaged vocal tissue.   [The Chemistry of Beer](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344106&m=2540722&u=ACS&j=13545448&s=http://youtu.be/2xKpQ11CpVE)  [The Chemistry of Cheese](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344107&m=2540722&u=ACS&j=13545448&s=http://youtu.be/jMAlToEYHJM)  [Without a Scratch: Self-Healing Materials](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344108&m=2540722&u=ACS&j=13545448&s=http://youtu.be/Bx3WTSSD5f0)  [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif  **ACS Podcasts**   |  |  | | --- | --- | | **Bytesize Science, a podcast for young listeners**  Bytesize Science is a science podcast for kids of all ages that entertains and educates, with new high-definition video podcasts and some episodes in Spanish. 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[Listen to the latest episodes of Bytesize Science](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344110&m=2540722&u=ACS&j=13545448&s=http://feeds.feedburner.com/BytesizeScience) in your web browser. |  | | **Global Challenges/Chemistry Solutions**  This special series of ACS podcasts focuses on some of the 21st century’s most daunting challenges, and how chemists and other scientists are finding solutions. [Subscribe at iTunes](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344111&m=2540722&u=ACS&j=13545448&s=http://itunes.apple.com/WebObjects/MZStore.woa/wa/viewPodcast?id=283627508) or listen and access other resources at the ACS web site [www.acs.org/GlobalChallenges](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344112&m=2540722&u=ACS&j=13545448&s=http://www.acs.org/GlobalChallenges). | http://images.magnetmail.net/images/clients/ACS/GlobalChallenges(1).jpg | | **Science Elements: ACS science news podcast**  Science Elements is a podcast of PressPac content that makes cutting-edge scientific discoveries from ACS journals available to a broader public audience. [Subscribe to Science Elements using iTunes](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344113&m=2540722&u=ACS&j=13545448&s=http://itunes.apple.com/WebObjects/MZStore.woa/wa/viewPodcast?id=259674986). [Listen to the latest episodes of Science Elements in your web browser](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344114&m=2540722&u=ACS&j=13545448&s=http://feeds2.feedburner.com/acs/scienceelements). Science Elements is on Facebook — [check out the latest updates and information](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344115&m=2540722&u=ACS&j=13545448&s=http://www.facebook.com/pages/Science-Elements/135606971011). |  | |  |  | | **And Don’t Miss. . .**  **[General Chemistry Glossary](http://www.mmsend88.com/link.cfm?r=800557068&sid=23344116&m=2540722&u=ACS&j=13545448&s=http://antoine.frostburg.edu/chem/senese/101/glossary.shtml)** Simple definitions and explanations of chemistry terms. |  |   [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif      The American Chemical Society is a nonprofit organization chartered by the U.S. Congress. With more than 163,000 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.  PressPac information is intended for your personal use in news gathering and reporting and should not be distributed to others. Anyone using advance PressPac information for stocks or securities dealing may be guilty of insider trading under the federal Securities Exchange Act of 1934. |