|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| http://images.magnetmail.net/images/template/acs/gold.gif In This Edition  |  | | --- | | [Nature-inspired advance for treating sensitive teeth](#1)  [Toward reducing the greenhouse gas emissions of the Internet and telecommunications](#ARTICLE_2)  [New method for uncovering side effects before a drug hits the market](#3)  [First synthesis of gold nanoparticles inside human hair for dyeing and much more](#4)  [What do cyborgs, shale gas and TSCA reform have in common?](#5) |  |  | | --- | | [**Journalists’ Resources:**](#Resources)  [About the Weekly PressPac](#About)  [Press releases, briefings and more from ACS’ 244th National Meeting](#registration)[Inside Science News Service](#InsideScience)  [C&EN Video Spotlight: Panda Power](#VideoSpotlight)  [Must-Read from C&EN: Regulating Drug Compounders](#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=22008944&m=2430637&u=ACS&j=12438969&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 - January 2, 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=22008984&m=2430637&u=ACS&j=12438969&s=https://twitter.com/ACSpressroom)  [http://images.magnetmail.net/images/clients/ACS/Facebook.jpg](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008985&m=2430637&u=ACS&j=12438969&s=https://www.facebook.com/pages/American-Chemical-Society-Press-Room/130342583687829)  ARTICLE #1 **FOR IMMEDIATE RELEASE**  **Nature-inspired advance for treating sensitive teeth** ACS Applied Materials & Interfaces   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/010213Tooth_thumb_smaller.jpg Mussel-inspired substance could reduce pain by preventing sensitivity to hot, cold, sweet or sour foods and drinks. Credit: Medioimages/Photodisc /Thinkstock |   Taking inspiration from Mother Nature, scientists are reporting an advance toward preventing the tooth sensitivity that affects millions of people around the world. Their report on development of the substance, similar to the adhesive that mussels use to attach to rocks and other surfaces in water, appears in the journal ACS Applied Materials & Interfaces.  Quan-Li Li, Chun Hung Chu and colleagues explain that about 3 out of every 4 people have teeth that are sensitive to hot, cold, sweet or sour foods and drinks. It occurs when the hard outer enamel layer on teeth and the softer underlying dentin wear away, stimulating the nerves inside. Some sugar-free gums and special toothpastes can help reduce that tooth hyper-sensitivity. However, Li and Chu cite the need for substances that rebuild both enamel and dentin at the same time. To meet that challenge, they turned to a sticky material similar to the adhesive that mussels use to adhere to surfaces. They reasoned that it could help keep minerals in contact with dentin long enough for the rebuilding process to occur.  They describe laboratory tests that involved bathing human teeth with worn-away enamel and dentin in liquid containing the sticky material and minerals. Teeth bathed in the sticky material and minerals reformed dentin and enamel. However, teeth bathed just in minerals reformed only enamel. The gooey substance “may be a simple universal technique to induce enamel and dentin remineralization simultaneously,” they concluded.  The authors acknowledge funding from [NSFC](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008947&m=2430637&u=ACS&j=12438969&s=http://www.nsfc.gov.cn/e_nsfc/desktop/zn/0101.htm) RGC grant, the Outstanding Youth Fund from the Board of Education of Anhui Province and the Youth Foundation of the Anhui Provincial Natural Science Foundation.   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/010213AIM_thumb.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22072322&m=2430637&u=ACS&j=12438969&s=http://web.1.c2.audiovideoweb.com/1c2web3536/010213aim.jpg) for a high-resolution image. |   ARTICLE #1 **FOR IMMEDIATE RELEASE** “Polydopamine-Induced Tooth Remineralization”  [DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008948&m=2430637&u=ACS&j=12438969&s=http://pubs.acs.org/stoken/presspac/presspac/full/10.1021/am302041b)   CONTACT: Quan-Li Li Stomatologic Hospital & College Anhui Medical University Hefei, 230032 China Phone: +86-551-5121527 Email: [ql-li@126.com](mailto:ql-li@126.com)  or  Chun Hung Chu University of Hong Kong Hong Kong China Phone: +852-28590287 Email: [chchu@hku.hk](mailto:chchu@hku.hk)  [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif  ARTICLE #2 **FOR IMMEDIATE RELEASE**  **Toward reducing the greenhouse gas emissions of the Internet and telecommunications** Environmental Science & Technology   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/010213Internet_thumb.jpg A new way to estimate Internet and telecommunications energy use may reduce the industry’s carbon footprint.Credit: Ryan McVay/Digital Vision/Thinkstock |   Amid growing concern over the surprisingly large amount of greenhouse gas produced by the Internet and other telecommunications activities, researchers are reporting new models of emissions and energy consumption that could help reduce their carbon footprint. Their report appears in ACS’ journal Environmental Science & Technology.  Researchers from the Centre for Energy-Efficient Telecommunications (CEET) and Bell Labs explain that the information communications and technology (ICT) industry, which delivers Internet, video, voice and other cloud services, produces more than 830 million tons of carbon dioxide (CO2), the main greenhouse gas, annually. That’s about 2 percent of global CO2 emissions — the same proportion as the aviation industry produces. Projections suggest that ICT sector’s share is expected to double by 2020. The team notes that controlling those emissions requires more accurate but still feasible models, which take into account the data traffic, energy use and CO2 production in networks and other elements of the ICT industry. Existing assessment models are inaccurate, so they set out to develop new approaches that better account for variations in equipment and other factors in the ICT industry.  They describe development and testing of two new models that better estimate the energy consumption and CO2 emissions of Internet and telecommunications services. They tested the models on a simulated network and on a deployed network that serves the majority of schools in California. Both models delivered better estimates than the current “top-down” models. The researchers suggest, based on their models, that more efficient power usage of facilities, more efficient use of energy-efficient equipment and renewable energy sources are three keys to reducing ICT emissions of CO2.  CEET is a partnership between Alcatel-Lucent, the University of Melbourne and the Victorian State Government. It is the world’s first research center exclusively dedicated to energy-efficient telecommunications technologies. Its research efforts cover a broad range of telecommunications network infrastructures and how those elements can increase their energy efficiency.   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/010213EST_thumb.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22070120&m=2430637&u=ACS&j=12438969&s=http://web.1.c2.audiovideoweb.com/1c2web3536/010213est.jpg) for a high-resolution image. |   ARTICLE #2 **FOR IMMEDIATE RELEASE** “Methodologies for Assessing the Use-Phase Power Consumption and Greenhouse Gas Emissions of Telecommunications Network Services”  [DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=22072323&m=2430637&u=ACS&j=12438969&s=http://pubs.acs.org/stoken/presspac/presspac/full/10.1021/es303384y)  CONTACT:Kat Franks, General Manager Centre for Energy-Efficient Telecommunications (CEET) The University of Melbourne Victoria 3010 Australia Phone: +61-3-8344-7682 Email: [kfranks@unimelb.edu.au](mailto:kfranks@unimelb.edu.au) Website: [www.ceet.unimelb.edu.au](http://www.mmsend88.com/link.cfm?r=800557068&sid=22021523&m=2430637&u=ACS&j=12438969&s=http://www.ceet.unimelb.edu.au)  [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif  ARTICLE #3 **FOR IMMEDIATE RELEASE  New method for uncovering side effects before a drug hits the market** Journal of Chemical Information and Modeling   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/010213Pills_thumb.jpg Research could save lives by identifying potential drug side effects before they hit the market. Credit: iStockphoto/Thinkstock |   Side effects are a major reason that drugs are taken off the market and a major reason why patients stop taking their medications, but scientists are now reporting the development of a new way to predict those adverse reactions ahead of time. The report on the method, which could save patients from severe side effects and save drug companies time and money, appears in ACS’ Journal of Chemical Information and Modeling.  Yoshihiro Yamanishi and colleagues explain that drug side effects are a major health problem — the fourth-leading cause of death in the U.S. — which by some estimates claim 100,000 lives every year. Serious side effects are the main reason why existing drugs must be removed from the market and why pharmaceutical companies halt development of new drugs after investing millions of dollars. Current methods of testing for side effects are costly and inaccurate. That’s why the scientists sought to develop a new computer-based approach to predicting possible side effects.  They show the usefulness of their proposed method on simultaneous prediction of 969 side effects of 658 drugs that already are in wide medical use. The method is based on knowledge about chemical and biological information about ingredients in these medications. They also used the approach to identify possible side effects for many uncharacterized molecules. Based on that work, the scientists conclude that the new method could be helpful in uncovering serious side effects early in the development and testing of new drugs, avoiding costly investment in medications unsuitable for marketing.   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/010213JCIM_thumb.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22070121&m=2430637&u=ACS&j=12438969&s=http://web.1.c2.audiovideoweb.com/1c2web3536/010213jcim.jpg) for a high-resolution image. |   ARTICLE #3 **FOR IMMEDIATE RELEASE** “Drug Side-Effect Prediction Based on the Integration of Chemical and Biological Spaces”  [DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008951&m=2430637&u=ACS&j=12438969&s=http://pubs.acs.org/stoken/presspac/presspac/full/10.1021/ci2005548)  CONTACT: Yoshihiro Yamanishi, Ph.D. Medical Institute of Bioregulation Kyushu University Fukuoka 812-8582 Japan Email: [yamanishi@bioreg.kyushu-u.ac.jp](mailto:yamanishi@bioreg.kyushu-u.ac.jp)    [To Top](#top)  http://images.magnetmail.net/images/clients/ACS/goldline.gif    ARTICLE #4 **FOR IMMEDIATE RELEASE: A PressPac Instant Replay\***  **First synthesis of gold nanoparticles inside human hair for dyeing and much more** Nano Letters   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/120512Hair_thumb(1).jpg Gold nanoparticles darken hair after treatment for one day, center, and 16 days, right (untreated hairs, left).[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22072324&m=2430637&u=ACS&j=12438969&s=http://web.1.c2.audiovideoweb.com/1c2web3536/120512hair.jpg) for a high-resolution image.Credit: American Chemical Society |   In a discovery with applications ranging from hair dyeing to electronic sensors to development of materials with improved properties, scientists are reporting the first synthesis of gold nanoparticles inside human hairs. Their study appears in ACS’ journal Nano Letters.  Philippe Walter and colleagues explain that gold nanoparticles — 40,000-60,000 of which could fit across the width of a human hair — are a hot topic. Scientists are exploring uses, ranging from electronics and sensors to medical diagnostic tests and cancer treatments. Gold nanoparticles have been deposited on hair for use as electrodes, and gold nanoparticles had been used to dye wool. Walter’s team looked at a new use — dyeing hair, inspired by the ancient Greeks’ and Romans’ use of another metal, lead, to color their hair.  They describe the first synthesis of fluorescent gold nanoparticles inside human hair. It involved soaking white hairs in a solution of a gold compound. The hairs turned pale yellow and then darkened to a deep brown. Using an electron microscope, the scientists confirmed that the particles were forming inside the hairs’ central core cortex. The color remained even after repeated washings.  The authors acknowledge funding from the [Agence Nationale de la Recherche](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008953&m=2430637&u=ACS&j=12438969&s=http://www.agence-nationale-recherche.fr/).   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/010212NLet_thumb.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22070122&m=2430637&u=ACS&j=12438969&s=http://web.1.c2.audiovideoweb.com/1c2web3536/010212nlet.jpg) for a high-resolution image. |   ARTICLE #4 **FOR IMMEDIATE RELEASE** “Hair Fiber as a Nanoreactor in Controlled Synthesis of Fluorescent Gold Nanoparticles”  [DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=22072325&m=2430637&u=ACS&j=12438969&s=http://pubs.acs.org/stoken/presspac/presspac/full/10.1021/nl303107w)  CONTACT: Philippe Walter, Ph.D. Université Pierre et Marie Curie-CNRS Ivry-sur-Seine, Paris 94200 France Phone : +33 1 44 27 82 22 Fax : +33 1 44 27 82 98 Email: [philippe.walter@upmc.fr](mailto:philippe.walter@upmc.fr)  **\* 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**  **What do cyborgs, shale gas and TSCA reform have in common?** Chemical & Engineering News   |  | | --- | | http://images.magnetmail.net/images/clients/ACS/010213CEN_thumb.jpg [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22076314&m=2430637&u=ACS&j=12438969&s=http://web.1.c2.audiovideoweb.com/1c2web3536/010213cen.jpg) for a high-resolution image. |   What were the most notable advances in the chemical world in 2012? Chemical & Engineering News (C&EN), the weekly newsmagazine of the American Chemical Society — the world’s largest scientific society — considers this question in a package of cover stories on the year past in chemistry. It also provides a reality check on discoveries that seemed promising a decade ago.  In “Research Year in Review,” which focuses on 11 key developments, C&EN cites several advances in integrating man and machine in efforts to combine electronics with living tissue, developments that the story says were foretold in fictional cyborgs and characters, such as Data — the humanlike android on Star Trek: The Next Generation. Among the magazine’s other picks for key 2012 advances: an easier way to make the mainstay antimalarial compound artemisinin, new laser tools for chemical analysis, designing proteins from scratch and innovative membrane technology that unmixes oil and water.  A second story in the package examines the year past for the chemical industry, including many setbacks for companies, especially in in Europe, and big positive developments for the U.S. brought by shale gas. Another story considers government and policy topics, including congressional activity in tackling key science issues, such as climate change, energy policy and attempts to reform the Toxic Substances Control Act. The cover package concludes with a retrospective on what research discoveries from 2002 are making a big impact today, and which have lost some luster.   ARTICLE #5 **FOR IMMEDIATE RELEASE**  These stories are available at:  “A Tough Year” [http://cenm.ag/bus2012](http://www.mmsend88.com/link.cfm?r=800557068&sid=22070123&m=2430637&u=ACS&j=12438969&s=http://cenm.ag/bus2012)  “Chemical Year in Review” [http://cenm.ag/chem2012](http://www.mmsend88.com/link.cfm?r=800557068&sid=22070124&m=2430637&u=ACS&j=12438969&s=http://cenm.ag/chem2012)  “Research Year in Review” [http://cenm.ag/sci2012](http://www.mmsend88.com/link.cfm?r=800557068&sid=22070125&m=2430637&u=ACS&j=12438969&s=http://cenm.ag/sci2012)  “Congress in Review” [http://cenm.ag/gov2012](http://www.mmsend88.com/link.cfm?r=800557068&sid=22070126&m=2430637&u=ACS&j=12438969&s=http://cenm.ag/gov2012)  [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.  **Press releases, briefings and more from ACS’ 244th National Meeting** [www.eurekalert.org/acsmeet.php](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008956&m=2430637&u=ACS&j=12438969&s=http://www.eurekalert.org/acsmeet.php)  [http://www.ustream.tv/channel/acslive](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008957&m=2430637&u=ACS&j=12438969&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=22072326&m=2430637&u=ACS&j=12438969&s=http://www.insidescience.org/) to visit the Inside Science News website.  **C&EN Video Spotlight: Panda Power** The search for better biofuels is leaving no patch of grass unturned — Mississippi State University researchers are studying the poo that pandas at the Memphis Zoo leave behind. Pandas are among several critters that digest a tough-to-break-down compound called cellulose, which is found in plant cell walls. Microbes living in pandas’ guts help carry out that degradation process. Since the microbes end up in panda poo, researchers can analyze the poo to find the microbial genes that do the digesting job. By harnessing these genes, researchers hope to someday make biofuels more efficiently from plants such as switchgrass and sugarcane.  [Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22070128&m=2430637&u=ACS&j=12438969&s=http://cen.acs.org/articles/90/i49/Make-Better-Biofuels-Scientists-Mine.html) to read the article and view the video.  **Must-Read from C&EN: Regulating Drug Compounders** On the heels of a multistate outbreak of fungal meningitis linked to a Massachusetts-based compounding pharmacy that produced injectable steroids, the U.S. Food & Drug Administration is pushing for new legislation that would strengthen its oversight of such facilities. For the full text, 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=22008959&m=2430637&u=ACS&j=12438969&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=22008960&m=2430637&u=ACS&j=12438969&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=22008961&m=2430637&u=ACS&j=12438969&s=https://twitter.com/signup). Then visit [http://twitter.com/ACSpressroom](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008962&m=2430637&u=ACS&j=12438969&s=http://twitter.com/ACSpressroom) and click the ‘join’ button beneath the press room logo.   **C&EN on Twitter** Follow @cenmag <[http://twitter.com/cenmag](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008963&m=2430637&u=ACS&j=12438969&s=http://twitter.com/cenmag)> for the latest news in chemistry and dispatches from C&EN's blog, CENtral Science <[http://centralscience.org](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008964&m=2430637&u=ACS&j=12438969&s=http://centralscience.org)>.**ACS Press Releases**  [Press releases](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008965&m=2430637&u=ACS&j=12438969&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=22008966&m=2430637&u=ACS&j=12438969&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=22008967&m=2430637&u=ACS&j=12438969&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=22008968&m=2430637&u=ACS&j=12438969&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=22008969&m=2430637&u=ACS&j=12438969&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=22008970&m=2430637&u=ACS&j=12438969&s=http://youtu.be/2xKpQ11CpVE)  [The Chemistry of Cheese](http://www.mmsend88.com/link.cfm?r=800557068&sid=22072327&m=2430637&u=ACS&j=12438969&s=http://youtu.be/jMAlToEYHJM)  [Without a scratch: Self-Healing Materials](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008972&m=2430637&u=ACS&j=12438969&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. [Subscribe to Bytesize Science using iTunes](http://www.mmsend88.com/link.cfm?r=800557068&sid=22072328&m=2430637&u=ACS&j=12438969&s=http://phobos.apple.com/WebObjects/MZStore.woa/wa/viewPodcast?id=266670954). No iTunes? No problem. [Listen to the latest episodes of Bytesize Science](http://www.mmsend88.com/link.cfm?r=800557068&sid=22008974&m=2430637&u=ACS&j=12438969&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=22072329&m=2430637&u=ACS&j=12438969&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=22072330&m=2430637&u=ACS&j=12438969&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=22072331&m=2430637&u=ACS&j=12438969&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=22072332&m=2430637&u=ACS&j=12438969&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=22072333&m=2430637&u=ACS&j=12438969&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=22072334&m=2430637&u=ACS&j=12438969&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 164,000 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. |