|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| http://images.magnetmail.net/images/template/acs/gold.gifIn This Edition

|  |
| --- |
| [Resurrection of 3-billion-year-old antibiotic-resistance proteins](#1)[A new anti-frost and anti-fog coating for glass](#ARTICLE_2)[Estimates reduce amount of additional land available for biofuel production](#3)[First mobile app for green chemistry fosters sustainable manufacturing of medicines](#4)  [Famous fraud cases foster a revolution in photograph conservation research](#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: Page Turner](#VideoSpotlight)[Must-Read from C&EN: How Well Do Prescription Drugs Really Work?](#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=22846552&m=2504520&u=ACS&j=13237324&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 SERVICEWeekly Press Package - February 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, editorm\_woods@acs.org202-872-6293General Inquiries: Michael Bernsteinm\_bernstein@acs.org 202-872-6042  Follow us: http://images.magnetmail.net/images/clients/ACS/Twitter1(1).png  http://images.magnetmail.net/images/clients/ACS/Facebook.jpgARTICLE #1 **FOR IMMEDIATE RELEASE****Resurrection of 3-billion-year-old antibiotic-resistance proteins**Journal of the American Chemical Society

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/022713antibioticpillsthumb.jpgLaboratory “resurrection” of antibiotic-resistant proteins that existed 3 billion years ago may point the way to new antibiotics for the 21st century.Credit: iStockphoto/Thinkstock |

Scientists are reporting “laboratory resurrections” of several 2-3-billion-year-old proteins that are ancient ancestors of the enzymes that enable today’s antibiotic-resistant bacteria to shrug off huge doses of penicillins, cephalosporins and other modern drugs. The achievement, reported in the Journal of the American Chemical Society, opens the door to a scientific “replay” of the evolution of antibiotic resistance with an eye to finding new ways to cope with the problem.Jose M. Sanchez-Ruiz, Eric A. Gaucher, Valeria A. Risso and colleagues explain that antibiotic resistance existed long before Alexander Fleming discovered the first antibiotic in 1928. Genes that contain instructions for making the proteins responsible for antibiotic resistance have been found in 30,000-year-old permafrost sediment and other ancient sites. Their research focused on the so-called beta-lactamases, enzymes responsible for resistance to the family of antibiotics that includes penicillin, which scientists believe originated billions of years ago.They describe using laboratory and statistical techniques to reconstruct the sequences of beta-lactamase proteins dating to Precambrian times, 2-3 billion years ago. The team also synthesized the inferred ancestral enzymes and conducted studies on their stability, structure and function. “The availability of laboratory resurrections of Precambrian beta-lactamases opens up new possibilities in the study of the emergence of antibiotic resistance,” the report states. “For instance, it should now be possible to perform laboratory replays of the molecular tape of lactamase evolution and use such replays to probe the molecular determinants of the efficiency of lactamases to adapt to different types of antibiotics.” The authors also note that the extreme stability and catalytic features displayed by the 2-3-billion-year-old lactamases suggest that resurrected Precambrian proteins have utility for the biotechnology industry.The authors and co-authors acknowledge financial support from the [Spanish Ministry of Science and Innovation](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846555&m=2504520&u=ACS&j=13237324&s=http://www.scholarshipportal.eu/students/browse/provider/52/ministry-of-science-and-innovation.html), [NASA Astrobiology Institute](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846556&m=2504520&u=ACS&j=13237324&s=https://astrobiology.nasa.gov/nai/), [FEDER Funds](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888107&m=2504520&u=ACS&j=13237324&s=http://europa.eu/legislation_summaries/employment_and_social_policy/job_creation_measures/l60015_es.htm) and the [Georgia Institute of Technology](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846557&m=2504520&u=ACS&j=13237324&s=http://www.gatech.edu/).

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/022713jacsthumb.jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888108&m=2504520&u=ACS&j=13237324&s=http://web.1.c2.audiovideoweb.com/1c2web3536/022713JACShires.jpg) for high-resolution image |

ARTICLE #1 **FOR IMMEDIATE RELEASE**“Hyperstability and Substrate Promiscuity in Laboratory Resurrections of Precambrian Beta-Lactamases”[DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846558&m=2504520&u=ACS&j=13237324&s=http://pubs.acs.org/stoken/presspac/presspac/abs/10.1021/ja311630a) CONTACT:Valeria A. Risso, Ph.D.Facultad de CienciasDepartamento de Química FísicaUniversidad de Granada, 18071-GranadaSpainPhone: +34-958240436Email: vrisso@ugr.esorJose M. Sanchez-Ruiz, Ph.D.Facultad de CienciasDepartamento de Química FísicaUniversidad de Granada, 18071-GranadaSpainPhone: +34-958243189Email: sanchezr@ugr.es [To Top](#top)http://images.magnetmail.net/images/clients/ACS/goldline.gifARTICLE #2 **FOR IMMEDIATE RELEASE****A new anti-frost and anti-fog coating for glass**ACS Nano

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/022713frostywindshieldthumb(1).jpgA coating could someday prevent frost and fog from forming on windshields, camera lenses and other surfaces.Credit: iStockphoto/Thinkstock |

In an advance toward glass that remains clear under the harshest of conditions, scientists are reporting development of a new water-repellant coating that resists both fogging and frosting. Their research on the coating, which could have uses ranging from automobile windshields to camera lenses, appears in the journal ACS Nano. Michael F. Rubner, Robert E. Cohen and colleagues point out that anti-fogging coatings that absorb water have been the focus of attention lately because of their ability to reduce light scattering and the resultant distortion caused by condensation. However, under extreme fogging conditions, these surfaces may frost and become foggy. They set out to make a better coating to withstand the aggressive conditions.Their report describes development and testing of a new coating that rapidly absorbs water molecules that cannot freeze in the coating. At the same time, the coating has a water-repelling or hydrophobic effect to larger water droplets. The hydrophobic character means that water droplets do not spread extensively on the coating but essentially remain as flattened droplets. The authors acknowledge funding from the [Samsung Scholarship](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888109&m=2504520&u=ACS&j=13237324&s=http://www.samsungscholarship.com/) and the [Materials Research Science and Engineering Centers (MRSEC) Program of the National Science Foundation](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846560&m=2504520&u=ACS&j=13237324&s=http://www.mrsec.org/).

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/022713acsnanothumb.jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22889880&m=2504520&u=ACS&j=13237324&s=http://web.1.c2.audiovideoweb.com/1c2web3536/022713acsnanohires.jpg) for high-resolution image |

ARTICLE #2 **FOR IMMEDIATE RELEASE**“Zwitter-Wettability and Antifogging Coatings with Frost-Resisting Capabilities”[DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846561&m=2504520&u=ACS&j=13237324&s=http://pubs.acs.org/stoken/presspac/presspac/full/10.1021/nn3057966)CONTACT:Michael F. Rubner, Ph.D.Department of Materials Science and EngineeringMassachusetts Institute of TechnologyCambridge, Mass. 02139Phone: 617-253-6701Email: rubner@mit.eduorRobert E. Cohen, Ph.D.Department of Chemical EngineeringMassachusetts Institute of TechnologyCambridge, Mass. 02139Phone: 617-253-3777Email: recohen@mit.edu [To Top](#top)http://images.magnetmail.net/images/clients/ACS/goldline.gifARTICLE #3 **FOR IMMEDIATE RELEASEEstimates reduce amount of additional land available for biofuel production**Environmental Science & Technology

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/022713landbiofuelthumb.jpgThe availability of suitable land may limit production of biofuels in the years to come.Credit: Stockbyte/Thinkstock |

Amid efforts to expand production of biofuels, scientists are reporting new estimates that downgrade the amount of additional land available for growing fuel crops by almost 80 percent. Their report appears in the ACS journal Environmental Science & Technology.Steffen Fritz and colleagues explain that growing concern exists in the U.S. and the European Union on how production of biofuels will impact food security. This has led to a realization that increased production of biofuels must take place on so-called “marginal land,” acreage not suitable for growing food crops, but capable of growing switch grass, Indian beech trees and Barbados nut trees. Concerned that previous estimates were targeting some areas where land is not marginal, the scientists did the calculations using data obtained through crowdsourcing, which were based on higher-resolution datasets.They concluded that previous studies had overestimated the amount of arable land, had underestimated the amount of land already being cultivated and had not fully considered other competing uses for land other than farming. The revised estimates show that 140 million-2.6 billion acres of additional land could be cultivated for biofuel production. That compares with previous estimates of 800 million-3.5 billion acres. This study highlights the large uncertainties in estimating land availability and points out that such estimates should be used with caution.The authors acknowledge funding from [European Community’s Framework Programme via the Project EuroGEOSS](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888111&m=2504520&u=ACS&j=13237324&s=http://www.eurogeoss.eu/default.aspx), [EnerGEO](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888112&m=2504520&u=ACS&j=13237324&s=http://www.energeo-project.eu/), [Pashmina](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888113&m=2504520&u=ACS&j=13237324&s=http://www.pashmina-project.eu/) and [ASAP programme of the Austrian Research Promotion Agency](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888114&m=2504520&u=ACS&j=13237324&s=http://www.ffg.at/en).

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/022713estthumb.jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888110&m=2504520&u=ACS&j=13237324&s=http://web.1.c2.audiovideoweb.com/1c2web3536/022713estnewhires.jpg) for high-resolution image |

ARTICLE #3 **FOR IMMEDIATE RELEASE**“Downgrading Recent Estimates of Land Available for Biofuel Production”[DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888116&m=2504520&u=ACS&j=13237324&s=http://pubs.acs.org/stoken/presspac/presspac/full/10.1021/es303141h)CONTACT:Steffen Fritz, Ph.D.International Institute of Applied Systems AnalysisEcosystem Services and Management ProgramSchlossplatz 1Laxenburg, A-2361AustriaPhone: +43-2236-807-353Fax: +43-2236-807599Email: fritz@iiasa.ac.at [To Top](#top)http://images.magnetmail.net/images/clients/ACS/goldline.gif ARTICLE #4 **FOR IMMEDIATE RELEASE: A PressPac Instant Replay\*****First mobile app for green chemistry fosters sustainable manufacturing of medicines**ACS Sustainable Chemistry & Engineering

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/022713greenchemappshires.jpgThe first mobile app to promote wider use of environmentally friendly and sustainable principles of green chemistry is available.[*Click here*](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888117&m=2504520&u=ACS&j=13237324&s=http://web.1.c2.audiovideoweb.com/1c2web3536/013013greenchemapps.jpg) for a high-resolution image. Credit: American Chemical Society |

Mention mobile applications, or mobile apps, and people think of games, email, news, weather, productivity and other software for Apple, Android and other smart phones and tablet computers. But an app with broader impact — the first mobile application to foster wider use of the environmentally friendly and sustainable principles of green chemistry — is the topic of a report in the American Chemical Society’s new journal, ACS Sustainable Chemistry & Engineering.Sean Ekins, Alex M. Clark and Antony Williams point out that the companies that manufacture medicines, electronics components and hundreds of other consumer products have a commitment to work in a sustainable fashion without damaging the environment. That’s the heart of “green chemistry,” often defined as “the utilization of a set of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture and application of chemical products.”Their article describes a guide on doing so for solvents, key ingredients in processes for making medicines. Some traditional processes generate 25-100 times more waste than the chemical they are making (e.g., pharmaceuticals). The solvents guide was developed by the ACS Green Chemistry Institute’s Pharmaceutical Roundtable, a group of 14 pharmaceutical companies. The Green Solvents mobile app version of the guide for Apple devices covers 60 different solvents and is available online at [https://itunes.apple.com/us/app/green-solvents/id446670983?mt=8](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888118&m=2504520&u=ACS&j=13237324&s=https://itunes.apple.com/us/app/green-solvents/id446670983?mt=8), and the Lab Solvents app for Android devices is available online at [https://play.google.com/store/apps/details?id=com.mmi.android.labsolvents](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888119&m=2504520&u=ACS&j=13237324&s=https://play.google.com/store/apps/details?id=com.mmi.android.labsolvents).

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/022713acssustainthumb.jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888120&m=2504520&u=ACS&j=13237324&s=http://web.1.c2.audiovideoweb.com/1c2web3536/022713acssustainhires.jpg) for high-resolution image |

ARTICLE #4 **FOR IMMEDIATE RELEASE**“Incorporating Green Chemistry Concepts into Mobile Chemistry Applications and Their Potential Uses”[DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888121&m=2504520&u=ACS&j=13237324&s=http://pubs.acs.org/stoken/presspac/presspac/full/10.1021/sc3000509)CONTACT:Sean Ekins Ph.D., D.Sc.Collaborations In Chemistry5616 Hilltop Needmore RoadFuquay-Varina, N.C. 27526Phone: 215-687-1320 Email: ekinssean@yahoo.com**\*A previous PressPac item that you may have missed**   [To Top](#top)http://images.magnetmail.net/images/clients/ACS/goldline.gifARTICLE #5 **FOR IMMEDIATE RELEASE****Famous fraud cases foster a revolution in photograph conservation research**Chemical & Engineering News

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/022513CENcoversmall(1).jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888122&m=2504520&u=ACS&j=13237324&s=http://web.1.c2.audiovideoweb.com/1c2web3536/022513CENcover.jpg) for high-resolution image. |

Two fraud cases that sent shock waves through the world of photography are helping to trigger a revolution in photo conservation science, according to 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.Sarah Everts, C&EN European correspondent, explains that the prestige and prices of photographs — long dismissed by the art establishment as a second-tier medium — began to rival those of paintings and sculptures in the 1980s. Collectors began paying hundreds of thousands of dollars and even up to $1 million for vintage and contemporary photographs. Fraud cases appeared in parallel with that rise in popularity.The article describes those cases, and explains how they led to million-dollar settlements that helped stimulate photo conservation research, transforming a niche field into what is now a mature science. Those conservation efforts embrace everything from family snapshots to priceless masterpieces, the article points out. ARTICLE #5 **FOR IMMEDIATE RELEASE**"Saving Endangered Images"This story is available at:[http://cenm.ag/photohistory](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888123&m=2504520&u=ACS&j=13237324&s=http://cenm.ag/photohistory)  [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=22846563&m=2504520&u=ACS&j=13237324&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=22846564&m=2504520&u=ACS&j=13237324&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=22846565&m=2504520&u=ACS&j=13237324&s=http://www.eurekalert.org/acsmeet.php) [www.ustream.tv/channel/acslive](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846566&m=2504520&u=ACS&j=13237324&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=22846567&m=2504520&u=ACS&j=13237324&s=http://www.insidescience.org/) to visit the Inside Science News website.**C&EN Video Spotlight: Page Turner**In the shadow of World War II, a Japanese chemist named Tetsuo Nozoe traveled outside his land for the first time and collected autographs from the people he met along the way. This turned into a 40-year hobby and a 1,200-page collection that showcases friendship and community in science. Nozoe’s notebooks are a visual feast of cartoons, doodles and even poetry. Eminent and ordinary chemists signed side by side. Now, the notebooks are being digitized and made available online, free for at least three years. Learn more about Nozoe’s story in this video, and find out why famous chemists, including Nobel Laureate Roald Hoffmann of Cornell University, think the interactive collection is both addictive and fun.[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=22888124&m=2504520&u=ACS&j=13237324&s=http://www.youtube.com/watch?v=pqswFQrUdw8) to view the video.**Must-Read from C&EN: How Well Do Prescription Drugs Really Work?**Some big drug companies have new management positions with puzzling titles, like “vice president of real-world data.” They are gathering information — critical in the new health-care reimbursement era — on how well their products actually work in patients. For the full story, contact newsroom@acs.org. **ACS Pressroom Blog** The ACS Office of Public Affairs' [pressroom blog](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846568&m=2504520&u=ACS&j=13237324&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=22846569&m=2504520&u=ACS&j=13237324&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=22846570&m=2504520&u=ACS&j=13237324&s=https://twitter.com/signup). Then visit [http://twitter.com/ACSpressroom](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846571&m=2504520&u=ACS&j=13237324&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=22846572&m=2504520&u=ACS&j=13237324&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=22846573&m=2504520&u=ACS&j=13237324&s=http://centralscience.org).**ACS Press Releases** [Press releases](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846574&m=2504520&u=ACS&j=13237324&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=22846575&m=2504520&u=ACS&j=13237324&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=22846576&m=2504520&u=ACS&j=13237324&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. **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=22846577&m=2504520&u=ACS&j=13237324&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=22846578&m=2504520&u=ACS&j=13237324&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=22846579&m=2504520&u=ACS&j=13237324&s=http://youtu.be/2xKpQ11CpVE)[The Chemistry of Cheese](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846580&m=2504520&u=ACS&j=13237324&s=http://youtu.be/jMAlToEYHJM)[Without a Scratch: Self-Healing Materials](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846581&m=2504520&u=ACS&j=13237324&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=22846582&m=2504520&u=ACS&j=13237324&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=22846583&m=2504520&u=ACS&j=13237324&s=http://feeds.feedburner.com/BytesizeScience) in your web browser.    | http://images.magnetmail.net/images/clients/ACS/Bytesizelogo(1).jpg |
| **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=22846584&m=2504520&u=ACS&j=13237324&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=22846585&m=2504520&u=ACS&j=13237324&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=22846586&m=2504520&u=ACS&j=13237324&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=22846587&m=2504520&u=ACS&j=13237324&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=22846588&m=2504520&u=ACS&j=13237324&s=http://www.facebook.com/pages/Science-Elements/135606971011).      | http://images.magnetmail.net/images/clients/ACS/scienceelements_02_150.gif  |
|   |   |
| **And Don’t Miss. . .****[General Chemistry Glossary](http://www.mmsend88.com/link.cfm?r=800557068&sid=22846589&m=2504520&u=ACS&j=13237324&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.    |