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

|  |
| --- |
| [A heady discovery for beer fans: The first gene for beer foam could improve froth](#1)[New micropumps for hand-held medical labs produce pressures 500 times higher than car tire](#ARTICLE_2)[Inspiration from Mother Nature leads to improved wood](#3)[Date palm juice: A potential new “green” anti-corrosion agent for aerospace industry](#4)  [The controversy over flame retardants in millions of sofas, chairs and other products](#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: Reversible, Light-Activated Anesthetic](#VideoSpotlight)[Must-Read from C&EN: Will Ethanol Remain in Gasoline?](#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=21105318&m=2351551&u=ACS&j=11949756&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 - October 31, 2012 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****A heady discovery for beer fans: The first gene for beer foam could improve froth**Journal of Agricultural and Food Chemistry

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/103112Beer_thumb.jpgA heady discovery for beer fans: The first gene for beer foam could improve froth.Credit: iStockphoto/Thinkstock |

The yeast used to make beer has yielded what may be the first gene for beer foam, scientists are reporting in a new study. Published in ACS’ Journal of Agricultural and Food Chemistry, the discovery opens the door to new possibilities for improving the frothy “head” so critical to the aroma and eye appeal of the world’s favorite alcoholic beverage, they say.Tomás G. Villa and colleagues explain that proteins from the barley and yeast used to make beer contribute to the quality of its foam. The foamy head consists of bubbles containing carbon dioxide gas, which yeast produces during fermentation. Proteins gather around the gas, forming the bubbles in the foam. Studies have shown that proteins from the yeast stabilize the foam, preventing the head from disappearing too soon. But until now, no one knew which yeast gene was responsible for making the foam-stabilizing protein. The researchers identified the gene, which they call CFG1. The gene is similar to those already identified in wine and sake yeasts that also are involved in foaming. “Taken together all the results shown in the present paper make … CFG1 gene a good candidate to improve the foam character in the brewing industry,” they say.

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/103112JAF_thumb.jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262328&m=2351551&u=ACS&j=11949756&s=http://web.1.c2.audiovideoweb.com/1c2web3536/103112jaf.jpg) for high-resolution image |

ARTICLE #1 **FOR IMMEDIATE RELEASE**“Cloning and Characterization of the Beer-Foaming Gene CFG1 from Saccharomyces pastorianus”[DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262329&m=2351551&u=ACS&j=11949756&s=http://pubs.acs.org/stoken/presspac/presspac/abs/10.1021/jf3027974) CONTACT:Tomás G. Villa, Ph.D.Department of MicrobiologySchool of BiotechnologyFaculty of PharmacyUniversity of Santiago de Compostela, 15782SpainEmail: tomas.gonzalez@usc.es [To Top](#top)http://images.magnetmail.net/images/clients/ACS/goldline.gifARTICLE #2 **FOR IMMEDIATE RELEASE****New micropumps for hand-held medical labs produce pressures 500 times higher than car tire**Analytical Chemistry

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/103112Pump_thumb.jpgThese micropumps for hand-held medical labs can produce high pressures (a U.S. quarter, left, helps illustrate how small the pumps are).Credit: American Chemical Society |

In an advance toward analyzing blood and urine instantly at a patient’s bedside instead of waiting for results from a central laboratory, scientists are reporting development of a new micropump capable of producing pressures almost 500 times higher than the pressure in a car tire. Described in ACS’ journal Analytical Chemistry, the pumps are for futuristic “labs-on-a-chip,” which reduce entire laboratories to the size of a postage stamp.Shaorong Liu and colleagues explain that powerful pumps are critical for high performance liquid chromatography (HPLC), a mainstay laboratory testing technology used in medical diagnosis, drug screening and numerous other purposes. HPLC can analyze 80 percent of all known chemical compounds. Scientists are trying to miniaturize HPLC for handheld devices, which would eliminate the need to send samples to central labs and wait for the results. One stumbling block, however, is the lack of suitable small, powerful pumps to push samples through HPLC devices.They describe invention of a device six times more powerful than the best existing pump of this kind. Linked together in series, their electroosmotic pumps can produce more than 17,000 pounds per square inch of pressure. The pumps use electroosmotic flow, in which an electrical current makes charged particles flow through a narrow channel. The new pumps could produce even higher pressures, the scientists report.The authors acknowledge funding from the [U.S. Department of Energy](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105319&m=2351551&u=ACS&j=11949756&s=http://energy.gov/) and the [Oklahoma Center for the Advancement of Science and Technology](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105320&m=2351551&u=ACS&j=11949756&s=http://www.ok.gov/ocast/).

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/103112AC_thumb.jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262330&m=2351551&u=ACS&j=11949756&s=http://web.1.c2.audiovideoweb.com/1c2web3536/103112ac.jpg) for high-resolution image |

ARTICLE #2 **FOR IMMEDIATE RELEASE**“Miniaturized Electroosmotic Pump Capable of Generating Pressures of More than 1200 Bar”[DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262331&m=2351551&u=ACS&j=11949756&s=http://pubs.acs.org/stoken/presspac/presspac/abs/10.1021/ac3025703)CONTACT:Shaorong Liu, Ph.D.University of OklahomaNorman, Okla. 73019Fax: 405-325-6111Email: shaorong.liu@ou.edu [To Top](#top)http://images.magnetmail.net/images/clients/ACS/goldline.gifARTICLE #3 **FOR IMMEDIATE RELEASEInspiration from Mother Nature leads to improved wood**ACS Applied Materials & Interfaces

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/103112Wood_thumb.jpgInspired by Mother Nature, researchers hope to make wood an even better building material.Credit: Stockbyte/Thinkstock |

Using the legendary properties of heartwood from the black locust tree as their inspiration, scientists have discovered a way to improve the performance of softwoods widely used in construction. The method, reported in the journal ACS Applied Materials & Interfaces, involves addition of similar kinds of flavonoid compounds that boost the health of humans.Ingo Burgert and colleagues explain that wood’s position as a mainstay building material over the centuries results from a combination of desirable factors, including surprising strength for a material so light in weight. Wood is renewable and sustainable, making it even more attractive in the 21st century. Wood, however, has a major drawback that limits its use: It collects moisture easily — warping, bending, twisting and rotting in ways that can undermine wooden structures. Some trees, like the black locust, deposit substances termed flavonoids into their less durable “sapwood.” It changes sapwood into darker “heartwood” that reduces water collection and resists rot. The scientists used this process as an inspiration for trying an improved softwood that is more stable than natural wood.They describe a process that incorporates flavonoids into the walls of the cells of spruce wood, a common building material for making houses and other products. The hydrophobic flavonoids are embedded in the more hydrophilic cell wall environment, meaning that the cell walls take in less water. Burgert and coworkers report that the treated wood was harder than untreated wood and more resistant to the effects of water, holding its shape better through changing humidity.The authors acknowledge funding from the [Max Planck Society](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105322&m=2351551&u=ACS&j=11949756&s=http://www.mpg.de/en), Germany, as well as the [Bundesamt für Umweltschutz](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262332&m=2351551&u=ACS&j=11949756&s=http://www.bafu.admin.ch/) and [Lignum](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105324&m=2351551&u=ACS&j=11949756&s=http://www.lignum.ch/organisation/), Switzerland.

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/103112AMI_thumb.jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262333&m=2351551&u=ACS&j=11949756&s=http://web.1.c2.audiovideoweb.com/1c2web3536/103112ami.jpg) for high-resolution image |

ARTICLE #3 **FOR IMMEDIATE RELEASE**“Flavonoid Insertion into Cell Walls Improves Wood Properties”[DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262334&m=2351551&u=ACS&j=11949756&s=http://pubs.acs.org/stoken/presspac/presspac/full/10.1021/am301266k)CONTACT:Ingo Burgert, Ph.D.ETH Zurich and Empa DuebendorfZurich, Switzerland Phone: +41 44-633-77-73Fax: +41 44-633-10-28E-mail: iburgert@ethz.ch [To Top](#top)http://images.magnetmail.net/images/clients/ACS/goldline.gif ARTICLE #4 **FOR IMMEDIATE RELEASE: A PressPac Instant Replay\*****Date palm juice: A potential new “green” anti-corrosion agent for aerospace industry**Industrial & Engineering Chemistry Research

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/092612Palm_thumb.jpgDate palm juice is a potential new “green” anti-corrosion agent for aerospace industry.Credit: iStockphoto/Thinkstock |

The search for a “greener” way to prevent corrosion on the kind of aluminum used in jetliners, cars and other products has led scientists to an unlikely source, according to a report in ACS’ journal Industrial & Engineering Chemistry Research. It’s the juice of the date palm — those tall, majestic trees that, until now, were noted mainly as sources of food and traditional medicines.Husnu Gerengi points out that strong, lightweight aluminum alloys are used to make planes, cars and industrial equipment. Aluminum corrodes when exposed to air, but unlike rusting steel, the corrosion of aluminum’s surface layer forms a protective film that prevents degradation of the underlying metal. However, that film breaks down in some harsh environments, like seawater, leaving the metal vulnerable. Engineers have developed coatings to protect aluminum in these applications, but many of these use potentially toxic chemicals. Previous research suggested that extracts of date palm leaves had an anti-corrosion effect. Gerengi decided to check date palm juice. He found that date palm juice inhibited corrosion of an aluminum alloy called AA7075, used in aerospace and other applications, in a salt solution. Gerengi noted that while an extract from date palm leaves is a known anticorrosive, this was the first test of the fruit’s juice. The juice, which he reported adsorbed into the aluminum’s surface, contains a number of sugars. Gerengi posited that these react with aluminum to form an anticorrosive film on the metal’s surface.The author acknowledges funding from the [Scientific and Technological Research Council of Turkey](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105325&m=2351551&u=ACS&j=11949756&s=http://www.tubitak.gov.tr/en/ot/10/).

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/103112IEC_thumb.jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262335&m=2351551&u=ACS&j=11949756&s=http://web.1.c2.audiovideoweb.com/1c2web3536/103112iec.jpg) for high-resolution image |

ARTICLE #4 **FOR IMMEDIATE RELEASE**“Anti-Corrosive Properties of Date Palm (Phoenix dactylifera L.) Fruit Juice on 7075 Type Aluminium Alloy in 3.5% NaCl Solution”[DOWNLOAD FULL TEXT ARTICLE](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105326&m=2351551&u=ACS&j=11949756&s=http://pubs.acs.org/stoken/presspac/presspac/abs/10.1021/ie301771u)CONTACT:Husnu Gerengi, Ph.D.Duzce UniversityDuzceTurkeyPhone: +90-505-3987953Email: husnugerengi@duzce.edu.tr**\* 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****The controversy over flame retardants in millions of sofas, chairs and other products**Chemical & Engineering News

|  |
| --- |
| http://images.magnetmail.net/images/clients/ACS/103112CEN_thumb.jpg[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262336&m=2351551&u=ACS&j=11949756&s=http://web.1.c2.audiovideoweb.com/1c2web3536/103112cen.jpg) for high-resolution image. |

Flame retardants in the polyurethane foam of millions of upholstered sofas, overstuffed chairs and other products have ignited a heated debate over safety, efficacy and fire-safety standards — and a search for alternative materials. That’s the topic of a cover story package in the current edition of Chemical & Engineering News (C&EN), the weekly newsmagazine of ACS, the world’s largest scientific society.An overview of the package describes the controversy, fostered largely by a California chemist, who claims that flame retardants pose unacceptable toxic hazards and do not work as effectively as widely believed. It points out, however, that numerous fire-safety experts question those claims about flame retardants, which have saved thousands of lives.A second article, by William G. Schulz, C&EN news editor, takes a closer look at the anti-flame retardant campaign and how it has outraged fire-safety scientists. In another article, C&EN Senior Correspondent Cheryl Hogue describes how the U.S. Environmental Protection Agency is taking steps to make sure flame retardants are safe for people and the environment. An additional article by Alexander H. Tullo, C&EN senior editor, describes efforts to develop new polymeric materials that will put to rest uncertainty over brominated flame retardants.ARTICLE #5 **FOR IMMEDIATE RELEASE**"Fighting Fires"This story is available at:[http://cenm.ag/fires](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262337&m=2351551&u=ACS&j=11949756&s=http://cenm.ag/fires)"Ablaze Over Furniture Fires"This story is available at:[http://cenm.ag/firetalk](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262338&m=2351551&u=ACS&j=11949756&s=http://cenm.ag/firetalk)"EPA Targets Flame Retardants"This story is available at:[http://cenm.ag/regulation](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262339&m=2351551&u=ACS&j=11949756&s=http://cenm.ag/regulation)"A Polymeric Solution"This story is available at: [http://cenm.ag/bromine](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262340&m=2351551&u=ACS&j=11949756&s=http://cenm.ag/bromine)  [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=21105328&m=2351551&u=ACS&j=11949756&s=http://www.eurekalert.org/acsmeet.php) [http://www.ustream.tv/channel/acslive](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105329&m=2351551&u=ACS&j=11949756&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=21105330&m=2351551&u=ACS&j=11949756&s=http://www.insidescience.org/) to visit the Inside Science News website.**C&EN Video Spotlight: Reversible, Light-Activated Anesthetic**A team of chemists and physicians, led by Dirk Trauner of the University of Munich and Erwin Sigel of Switzerland’s University of Bern, is reporting a new molecule that works like a general anesthetic in the dark, but turns off instantly with a flash of light. Tadpoles exposed to the molecule “go under,” but start swimming instantly when scientists hold a blue-violet light up to their tank. The molecule is not for use in hospitals, however. But Ivan Dmochowski, a researcher at the University of Pennsylvania who wasn’t involved with the study, thinks the molecule might help researchers figure out how general anesthetics work, something that's been a mystery for over 100 years.[Click here](http://www.mmsend88.com/link.cfm?r=800557068&sid=21262341&m=2351551&u=ACS&j=11949756&s=http://cenm.ag/azop) to read the article and view the video.**Must-Read from C&EN: Will Ethanol Remain in Gasoline?**Deliberations now underway will decide whether the U.S. Environmental Protection Agency eliminates, modifies or leaves alone a requirement that ethanol be added to gasoline. 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=21105331&m=2351551&u=ACS&j=11949756&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=21105332&m=2351551&u=ACS&j=11949756&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=21105333&m=2351551&u=ACS&j=11949756&s=https://twitter.com/signup). Then visit [http://twitter.com/ACSpressroom](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105334&m=2351551&u=ACS&j=11949756&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=21105335&m=2351551&u=ACS&j=11949756&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=21105336&m=2351551&u=ACS&j=11949756&s=http://centralscience.org)>.**ACS Press Releases** [Press releases](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105337&m=2351551&u=ACS&j=11949756&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=21105338&m=2351551&u=ACS&j=11949756&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=21105339&m=2351551&u=ACS&j=11949756&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=21105340&m=2351551&u=ACS&j=11949756&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=21105341&m=2351551&u=ACS&j=11949756&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=21105342&m=2351551&u=ACS&j=11949756&s=http://youtu.be/2xKpQ11CpVE)[The Chemistry of Cheese](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105343&m=2351551&u=ACS&j=11949756&s=http://youtu.be/jMAlToEYHJM)[Without a scratch: Self-Healing Materials](http://www.mmsend88.com/link.cfm?r=800557068&sid=21105344&m=2351551&u=ACS&j=11949756&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=21105345&m=2351551&u=ACS&j=11949756&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=21105346&m=2351551&u=ACS&j=11949756&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=21105347&m=2351551&u=ACS&j=11949756&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=21105348&m=2351551&u=ACS&j=11949756&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=21105349&m=2351551&u=ACS&j=11949756&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=21105350&m=2351551&u=ACS&j=11949756&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=21105351&m=2351551&u=ACS&j=11949756&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=21105353&m=2351551&u=ACS&j=11949756&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.    |