



November 2008

### Biotech News

---

- Inspired by the electrocytes in electric eels, chemical engineering researchers designed artificial cells to generate electricity that could eventually power medical implants biologically.  
<http://opa.yale.edu/news/article.aspx?id=6119&s=t>
- SBE member Christina Smolke and her engineering team have designed a synthetic RNA device that detects and responds to biochemical signals inside a cell or in its immediate environment.  
[http://mr.caltech.edu/media/Press\\_Releases/PR13194.html](http://mr.caltech.edu/media/Press_Releases/PR13194.html)
- Chemists build hybrid catalytic protein capable of being controlled by light, which could eventually be useful in modulating the activities of many proteins inside cells.  
<http://www.science.psu.edu/alert/Benkovic10-2008.htm>
- Scientists have invented a new device, the "chemistroke," that makes it possible to stimulate, record, and analyze molecular signals at high resolution.  
[http://news.uchicago.edu/news.php?asset\\_id=1464](http://news.uchicago.edu/news.php?asset_id=1464)
- DOE and USDA release the National Biofuels Action Plan (NBAP), an interagency plan detailing the collaborative efforts of federal agencies to accelerate the development of a sustainable fuels industry. DOE awards it \$83.3 million.  
[http://www1.eere.energy.gov/biomass/news\\_detail.html?news\\_id=12026](http://www1.eere.energy.gov/biomass/news_detail.html?news_id=12026)

### Society News

---

SBE member **Nicholas A. Peppas**, professor of biomedical engineering, chemical engineering and pharmaceuticals at the University of Texas at Austin, was elected into the Institute of Medicine of the National Academy of Sciences for his work in controlled drug delivery. Professor Peppas is also a member of the National Academy of Engineering.  
[http://www.utexas.edu/news/2008/10/13/peppas\\_medicine/](http://www.utexas.edu/news/2008/10/13/peppas_medicine/)

AICHE member **Kristi Anseth** of the University of Colorado has been named one of the "Brilliant 10" of "Popular Science" magazine for her innovative material science research including degradable polymer scaffolds for growing human tissues. The "Brilliant 10" award recognizes pioneering work in science and engineering by younger researchers.  
<http://www.colorado.edu/news/p/696ff01e61fd819e121eca6dd8baee8d.html>

These researchers will be presenting their work at AICHE's Annual Meeting in Philadelphia, PA from November 16-21, 2008. Click [here](#) to browse the technical program and to register. Don't miss these excited bio-related events!

- **Biology for Chemical Engineers**, a technical course taught by Mike Amos of NIST is designed to provide knowledge and tools for today's chemical engineers who are new or aspiring to practice biotechnology, on Sunday, November 16, 8:00am - 5:00pm. To find out more or register, please go to <http://www.aiche.org/SBE/Education/Courses.aspx>

- **The Biofuels Symposium: Future Fuels from Renewable Resources** will be held on Monday, November 17, 2008 from 3-5 PM in the Marriott Philadelphia Downtown Salon G/H. The session highlights biomass availability and technologies enabling the thermochemical and biochemical conversion of biomass into energy and includes societal and policy impacts. Speakers are:
  - James Dumesic, University of Wisconsin, "The Catalytic Conversion of Bioproducts to Fuels".
  - Bruce Dale, Michigan State University, "All Biomass is Local: Thinking Creatively about Biofuel Feedstocks"
  - Timothy Searchinger, Princeton University, "Supplying Biofuels: Implications for Costs, Food and Global Warming."
- **Professional Progress Award Lecture by Berkeley's Jay Keasling** on "Synthetic Biology in Pursuit of Low-Cost, Effective, Anti-Malarial Drugs." Tuesday, November 18, 2008, 11:15am - 12:15pm. Marriott Philadelphia Downtown Salon G/H.
- **Professor James Swartz of Stanford University** is this year's winner of SBE's James E. Bailey Award. Professor Swartz will give his award lecture on Tuesday, November 18 at 6:30 – 7:30 pm, entitled "Look, Mom, NO CELLS! Providing New Freedom for Engineering Efficient Biological Systems."
- **SBE's Hospitality Suite**, sponsored by Merck Research Laboratories. Tuesday, November 18, 9:00-11:00pm. This suite is free for SBE members. Join SBE now at <https://www.aiche.org/apps/ecommerce/bio/index.asp>.

Check out more [Bio-related events](#) at the 2008 AIChE Annual Meeting and register online [here](#).

### SBE Events

---

**Call for Papers extended for SBE's 2nd International Conference on Biomolecular Engineering (ICBE)**, January 18-21, 2009 at the Fess Parker Doubletree Hotel in Santa Barbara, CA. The conference is the premier biomolecular engineering conference, attracting leading authorities that use quantitative approaches to advance the understanding and application of biology at the molecular level: Keynote and invited, confirmed speakers include:

- **Jay Keasling**, *University of California, Berkeley*
- **Peter Schultz**, *The Scripps Institute*
- **James Wells**, *University of California, San Francisco*
- **Frances Arnold**, *California Institute of Technology*
- **John Clardy**, *Harvard University*
- **Steve DelCardayre**, *LS9*
- **John Desjarlais**, *Xencor*
- **Andrew Ellington**, *University of Texas, Austin*
- **Klaus Hahn**, *University of North Carolina at Chapel Hill*
- **Sang Yup Lee**, *Korea Advanced Institute of Science and Technology*
- **Stephen Michnick**, *University of Montreal*
- **Bernhard Palsson**, *University of California, San Diego*
- **Andreas Plückthun**, *University of Zürich*
- **Uwe Sauer**, *ETH Zurich*
- **Gideon Schreiber**, *Weizmann Institute of Science*
- **James Swartz**, *Stanford University*
- **Bruce Tidor**, *Massachusetts Institute of Technology*
- **Stefan Wildt**, *Merck*.

Submit an abstract or find out more at <http://www.aiche.org/ICBE>. The abstract deadline

closes on November 21, 2008.

**Submit an abstract for SBE's 2nd International Conference on Accelerating Biopharmaceutical Development**, on March 9-12, 2009 at the Marriott Coronado Island Resort in Coronado, CA. This conference will focus on recent developments (particularly new, "disruptive" technologies) that will be key to accelerating the pace and productivity of biopharmaceutical development. If you are working on the development and manufacture of biopharmaceuticals such as antibodies, vaccines or therapeutic proteins, you should attend to learn how you can improve your productivity.

Keynote speakers include:

- **Janice Reichert**, *Senior Research Fellow*, Tufts Center for the Study of Drug Development, Boston, Massachusetts
- **John Carpenter**, *Professor of Pharmaceutical Biotechnology, Co-Director*, Center for Pharmaceutical Biology, University of Colorado Denver
- **Rob Garnick**, *Senior Vice President*, Regulatory, Quality and Compliance, Genentech.

To receive more information, go to <http://www.aiche.org/AcceleratingBio>.

### Join Now

---

Not a current SBE member? It's never too late to join or renew. Costs are \$75 for regular members, \$25 for graduate students, \$10 for AIChE, ACS and IBE members, or free for undergraduates. Join now at <http://www.aiche.org/apps/ecommerce/bio/index.asp>.

### Member benefits include:

- Subscription to SBE's semi-annual BioSupplement to Chemical Engineering Progress.
- Discounts on leading biological engineering conferences including SBE and SBE cosponsored meetings and courses.
- Access to online membership directory.
- A voice in education, employment and technology advancement topics.

### Comments?

---

SBE's *e-Connections* is edited by Adrian Andrew Fay, Web Science Editor, with input from SBE staff. Contact us at [bio@aiiche.org](mailto:bio@aiiche.org)

*The Society for Biological Engineering (SBE) is a new technological community of AIChE  
Its mission is to promote the integration of biology with engineering and realize its benefits  
through bioprocessing, biomedical, and biomolecular applications.  
For comments and contributions to SBE Connections, email <mailto:bio@aiiche.org>*

AIChE © 2008 American Institute of Chemical Engineers