



American Institute of Chemical Engineers Knoxville-Oak Ridge Section

For additional information see our Web site at: <http://www.ornl.gov/sci/aiche/>
Or contact: Linda Puckett, puckettlf@ornl.gov, (865)574-6984 or
Betty Frazier, bfrazier@utk.edu, (865)974-2421

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March 2008 Meeting

Date: Thursday, March 13, 2008
Cost: \$15
Location: Gondolier's, West End Avenue, Farragut TN (northern extension of Concord Road - off Kingston Pike)
Menu: From Menu
5:30 pm Executive Committee Meeting (All members welcome)
6:00 pm Dinner – From menu
7:00 pm Program – Scott Curran and Sean Peterson, UT Graduate Students - *UT Biodiesel - A Model for Campus Sustainability*

Abstract – The coordinators from the small scale waste cooking oil to biodiesel production plant at the University of Tennessee will talk about the UT Biodiesel project. The talk will be focus on sustainable biodiesel production and the details of the methods used to produce biodiesel, test the fuel, and dispose of the waste. More information on this project can be found at biofuels.utk.edu.

Bio – Scott Curran and Sean Peterson are both graduate students working under the direction of Dr. Butch Irick at the University of Tennessee, where they both received their bachelors in mechanical engineering. Scott and Sean took over the biodiesel project in the summer of 2005 and have been working on production and research since. Scott and Sean are also team leaders for the Challenge X program at UT in which students have built a biodiesel powered electric hybrid SUV for the Department of Energy and General Motors sponsored competition.

Please make your reservations as soon as possible, but no later than noon on March 12, by contacting

Linda Puckett, puckettlf@ornl.gov, (865)574-6984 or
Betty Frazier, bfrazier@utk.edu, (865)974-2421.

The Section will subsidize up to 15 students.

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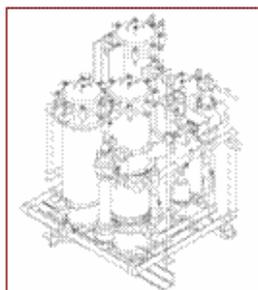
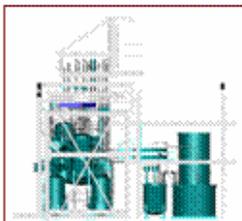
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Southern Appalachian Science and Engineering Fair

The Southern Appalachian Science and Engineering Fair (SASEF) will be March 31-April 3, 2008 at the UT Thompson Boling Arena, Knoxville, TN.

The SASEF is sponsored annually by The University of Tennessee. The Fair began in 1952 to heighten the interests of area students to science and engineering. The Fair tries to develop an outlet for creative energy and analytical skills in our youth. Students in the Senior Division (grades 9-12) compete for two opportunities to represent the SASEF at the Intel International Science and Engineering Fair. Students in the Junior Division (grades 6-8) compete separately for their own awards. The younger students learn a great deal by being involved in the competition each year. Through their experience with the fair, they will gain insight that will prove useful in future fairs and future endeavors.

If you would like to volunteer to assist with the SASEF, please see their web site at <http://www.sasef.com/default.htm> for additional information or contact

Dr. Joanne Logan
University of Tennessee
2506 EJ Chapman Dr.
Knoxville TN 37996-4531
Phone: 865-974-8803
email: loganj@utk.edu

Members of the Knoxville Oak Ridge Section of the AIChE will participate in the SASEF as judges and will determine the top chemistry and/or engineering related projects in the Senior and Junior Divisions, which will each receive a \$50 prize.



SASEF Southern Appalachian
Science and Engineering Fair

College of Engineering Distinguished Lecture Series



The Department of Chemical and Biomolecular Engineering (CBE) presents "New Strategies for the Discovery of Therapeutic Antibodies and Enzymes," a seminar by **Dr. George Georgiou**, professor of chemical and biomolecular engineering at the University of Texas-Austin. The event will take place Wednesday, March 12, 2008, at 3:00 p.m. in 307 Science and Engineering Research Facility. For more information, contact the CBE department at (865) 974-2421.

One of the long-term interests of Dr. Georgiou's research group is the engineering of proteins for pharmaceutical and biotechnology applications. To this end, they have developed a set of ultra-high throughput screening techniques that enable the isolation of novel proteins with desired functions from ensembles of hundreds of millions of protein variants, created by molecular biology techniques. These studies have led to the engineering of therapeutic antibodies that neutralize bacterial pathogens and of

enzymes that exhibit exquisite catalytic activity. The biochemical characterization of the resulting engineered proteins has provided a wealth of mechanistic information that has aided the understanding of molecular recognition and biocatalysis. Specific examples will be discussed as part of this talk:

1. The development, and therapeutic evaluation, of recombinant antibodies.
2. The engineering of proteases that exhibit exceptional activity and selectivity towards the cleavage of desired peptide targets.
3. "Humanized" non-immunogenic enzymes for therapeutic purposes.

Dr. George Georgiou is a professor of chemical and biomedical engineering and a member of the Institute for Cell and Molecular Biology at the University of Texas, Austin. He received his B.Sc. degree from the University of Manchester, U.K. and his Ph.D. from Cornell in 1987. He was elected to the U.S.

National Academy of Engineering in 2005 and has received numerous awards including the ACS Biochemical Technology Award (2003), the AIChE Professional Progress Award (2005) and the AMGEN Biochemical Engineering Award (2007). His research interests include engineering of therapeutic antibodies and enzymes; the mechanism of oxidative protein folding in bacteria; protein translocation via the Twin Arginine Transporter (Tat) pathway; and RNA decay in *E.coli*.



Dr. Georgiou

(Announcement taken from The University of Tennessee College of Engineering February 28, 2008 Newsletter)

"It has often been observed, that those who have the most time at their disposal profit by it the least. A single hour a day, steadily given to the study of some interesting subject, brings unexpected accumulations of knowledge."

*William Ellery Channing
1780-1842.*

The foremost Unitarian preacher in the United States in the early nineteenth century and one of Unitarianism's leading theologians. He was known for his articulate and impassioned sermons and public speeches, and as a prominent thinker in the liberal theology of the day.

Activities Calendar

Date	Time	Topic	Speaker	Location
Mar 13	6:00 PM	Biodiesel - A Model for Campus Sustainability	Scott Curran and Sean Peterson	Gondolier's, West End Avenue, Farragut TN
Apr 6-10		2008 AIChE Spring National Meeting		New Orleans, LA
Apr 2	6:00 PM	Student Awards	Student Project Teams	Hermitage Room, University Center
May 15 or 20	6:00 PM	U.T. Chemical Engineering Dept.	TBD	TBD

Sponsoring Opportunities

We continue to accept advertising in the newsletter in order to provide funds to support student participation in the meetings.

Rates per newsletter are:

\$80 full-page advertisement

\$45 half-page advertisement

\$25 quarter-page advertisement

The section will also continue to accept individual or corporate sponsors to provide student meals at section meetings. The sponsor

will be recognized at the meeting and in the Newsletter.

The cost to sponsor one meeting is **\$200**. It's a great way to encourage students to attend the local meetings and become future members in the Institute!



"The only measure of what you believe is what you do.

If you want to know what people believe, don't read what they write, don't ask them what they believe, just observe what they do."

*Ashley Montagu
1905-1999.*

British-American anthropologist and humanist who popularized issues such as race and gender and their relation to politics and development.

Search for Chair-Elect Continues

The search for a new Chair-elect for the local section is continuing.

Please contact one of the section officers if you would be willing to serve as the Chair-elect. The

duties of the officers are described in the bylaws (<http://www.ornl.gov/sci/aiche/bylaws.html>). The Chair-elect's responsibilities primarily include: (1) Serving as Chair at meetings of the

Section when necessary, (2) organizing the annual planning meeting, and (3) succession to chair at the start of the new year.

Officers

Chair:	Michael Hollander	574-1150	enviroms@att.net
Chair-Elect:	TBD		
Secretary:	David DePaoli	574-6817	depaolidw@ornl.gov
Treasurer:	Paul Taylor	574-1965	taylorpa@ornl.gov
Directors:	Mark Swientoniewski	574-1150	swientoniemd@bechteljacobs.org
Term ends 2008	Steve McCoy	220-4730	steven.mccoy@ttnus.com
Term ends 2008	Ed Alperin	694-7335	Ed.alperin@shawgrp.com
Term ends 2009	Stuart Daw	946-1341	dawcs@ornl.gov
Term ends 2009	Tom Busmann	694-7517	tbusmann@focusenv.com
Membership:	Paul Taylor	574-1965	taylorpa@ornl.gov
Newsletter:	Linda Puckett	574-6984	puckettlf@ornl.gov
Webmaster:	Ben Lewis	574-4091	lewisbejr@ornl.gov
E-mail:			aiche-chat@chem.engr.utk.edu
Website			http://www.ornl.gov/aiche

Knoxville - Oak Ridge Section

P.O. Box 2008
Bldg. 4500N, Room B14
Oak Ridge, TN 37830-6243

Phone: 574-6984

Fax: 574-6986

E-Mail: [aiche-
chat@chem.engr.utk.edu](mailto:aiche-chat@chem.engr.utk.edu)



We're on the Web!

See us at:

<http://www.ornl.gov/sci/aiche/>

About Our Organization – Members Only Benefits

One of the many benefits from membership in the AIChE is access to on-line information such as:

- [Search Member Directory](#) – Contact colleagues and associates using AIChE's protected member search feature.
- [Register for Meetings](#) - As an AIChE member, you save \$200 or more on registration fees. Membership pays for itself when you attend just one conference. Plus, you can save up to 15% on airfare and 25% on rental cars when you book through AIChE's travel center.
- [Read CEP](#) – Read current and past issues of Chemical Engineering Progress on-line.
- [Access eLibrary](#) – Access AIChE's extensive library of reference texts and information.
- [Available Discounts](#) - As an AIChE member, you have many advantages. AIChE offers its members identity protection, UPS and car rental discounts, insurances plans, and many other financial services.

(Excerpt from the National AIChE web site at <http://www.aiche.org/MemberCenter/>)

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