

TUFTS CHEMICAL & BIOLOGICAL ENGINEERING ALUMNI NEWSLETTER

DEPARTMENT OF CHEMICAL AND BIOLOGICAL ENGINEERING
TUFTS UNIVERSITY

Welcome from the Department Chair



Dr. Christos Georgakis joined the Department in January 2004

Welcome to the first issue of the new generation of the Alumni Newsletter, a tradition we have revived from years past and aim to bring to you on a regular basis. As you can see from the contents of this issue, the Department has undergone diverse changes over the past few years. We have welcomed new faculty and staff, received some pres-

tigious research grants, and developed curriculum initiatives that will continue to enhance the learning and research environment of our students and boost our profile nationally.

I am proud to say that in my first year with the University, I have witnessed firsthand that the Department is poised to take a substantial leap forward and to successfully meet several of the challenges that it set for itself with its name change in 2000 to Chemical and Biological Engineering. For my part, I have challenged the faculty to join me in doing the best we can to make the Department one of the top 20

in the country. In this challenging mission we will need your strong and continued support.

You can re-start supporting your Department by joining us on May 7 as we honor Professor Gregory Botsaris, who retired in 2004 but remains active as Research Professor, with a Symposium on his 75th birthday followed by an Alumni Dinner (see page 3).

I have high expectations for the coming year and I promise to keep in touch with you on a regular basis. Please fill in the brief Alumni Survey (page 4) to ensure that we have your updated information.

*Dr. Christos Georgakis,
Department Chair*

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Department News Overview

The Department has undergone substantial changes in the past few years, and continues to grow at a rapid rate.

In the fall of 2002, the Department welcomed the addition of full-time Assistant Professor, Dr. Kyongbum Lee (Ph.D., M.I.T., 2002).

We were very sorry to see Professor Eliana De Bernardez Clark depart our faculty for a position at Genzyme Corp. in the spring of 2003. We wish her the very best of luck.

Our faculty continued to grow in 2004 as we welcomed our new Chairman, Dr. Christos Georgakis, who joined us from the Polytechnic University in Brooklyn, as well as full-time Assistant Professor, Dr. Blaine Pfeiffer (Ph.D., Stanford University, 2002).

In 2005, our administrative support staff expanded with the addition of Staff Assistant Erin Quigley, Administrative Assistant Joanna Huckins, and Editorial Assistant Beth Frasso.

More department changes are in the works for 2005.

We are currently interviewing candidates to fill a full-time faculty position at the rank of Assistant or Associate Professor.

In other news, the Department received some generous research grants (page 2) that will improve our research programs.

We are also gearing up for some big events this semester. The Department Advisory Board Meeting (page 2) will take place in April, and a day-long Symposium and Alumni Dinner will take place in May in honor of Professor Gregory Botsaris



Top: Professor Kyongbum Lee, Ph.D.

Bottom: Professor Blaine Pfeiffer, Ph.D.

**Unique Opportunity to Network with Tufts Alumni and
Other Chemical Engineering Professionals**

You are Invited to Two Events on *MAY 7*

Please Join Us! Please Join Us! Please Join Us! Please Join Us! Please Join Us!

**SYMPOSIUM IN HONOR OF PROFESSOR GREGORY BOTSARIS:
SATURDAY, MAY 7, 2005 9:00A.M.-4:30P.M.**

This one-day event, sponsored by the Department, presents a unique opportunity to connect with alumni, industry professionals and academics, the first event of its kind since the Department's Centennial Symposium in 2001. The Symposium will begin at 9:00a.m. on Saturday, May 7, 2005 at the Cabot Auditorium on the Tufts main campus. A catered luncheon will be provided for all participants. You will get the chance to meet our new Department Chair, Dr. Christos Georgakis, who joined us in January 2004, and our new faculty members as well as mingle during scheduled networking sessions with our distinguished participants and speakers. Confirmed speakers include Dr. Richard Siegel of KERAMIDA Environmental, Inc.; Professor Ronald W. Rousseau of the Georgia Institute of Technology; Dr. Mary Viola of the Gordon Institute; Dr. Kostas Saranteas of Sepracor; and Professor Dion Dionysiou of the University of Cincinnati. The Symposium is being organized by Professor Maria Flytzani-Stephanopoulos. Program details will be posted on the Department website (<http://ase.tufts.edu/chemical/default.asp>) as they become available.

ALUMNI DINNER: SATURDAY, MAY 7, 2005 5:00P.M.

The Alumni Dinner follows the Symposium and presents another fantastic opportunity to connect with colleagues and classmates. The focus of this event is the celebration of the 75th birthday of Professor Gregory Botsaris. The evening will begin at 5:00p.m. with a cocktail & networking hour, followed by a catered dinner at 6:00. The dinner will be held at the Faculty Lounge on the Tufts main campus and costs \$30 per person (*note: the \$25/person appearing on page 3 of the newsletter was printed in error. Please disregard.*) Guests of alumni are welcome to attend. The Alumni Dinner offers a chance to interact with other alumni and to forge lasting professional and social connections based on shared experiences in the Chemical & Biological Engineering Department. This will be the first of what we hope to make an annual Alumni Dinner tradition, and it is the presence of our illustrious alumni, like you, that will make this event a success!

RSVP DETAILS

Please RSVP before April 20 by checking the boxes below, detaching this portion of the flyer, and mailing with payment (\$30/person) to the address on the right.

Name (please print): _____

Yes, I will attend the Symposium in honor of Professor Gregory Botsaris on Saturday, May 7.

Yes, I will attend the Alumni Dinner on Saturday, May 7 with _____ guests.

Name(s) of guest(s): _____

Please Respond to:

JOANNA HUCKINS
DEPARTMENT OF CHEMICAL
AND BIOLOGICAL
ENGINEERING

Science and Technology
Center
Tufts University
4 Colby Street
Medford, MA 02155

Phone: 617-627-3900
Fax: 617-627-3991

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joanna.huckins@tufts.edu

Undergraduate Curriculum Initiatives



Our graduate students develop innovations integrating chemistry, biology, and engineering

The Department is substantially revising its curriculum to achieve its goals of seamless integration of chemical and biological engineering.

In 2004, three workshops on undergraduate curriculum development were organized by Professor Saltsburg and held at Tufts, sponsored by a National Science Foundation planning grant for department-level reform of undergraduate engineering education. More than 100 faculty from other Universities traveled to Tufts to participate in the discussions. The objectives were to determine nec-

essary curriculum revision in order to achieve successful integration of the biological engineering component without losing the fundamental approach to problem-solving based on traditional chemical engineering concepts. The workshops provided thoughtful material for core curriculum development for preparing the new generation of chemical and biological engineers.

In April 2005, the Department will be visited by an Advisory Board to review several Department initia-

tives that are under way, including undergraduate curriculum development, and to advise us how to best meet our challenging objectives. Advisory Board members include several School of Engineering Overseers, six academics from other Universities, and nine leading industry professionals. Several Board members are also alumni of our Department. Michael Thien, Vice President of Process R&D at Merck Corporation, will serve as Advisory Board Chair.

Department Awarded NSF-NIRT Grant



Professor Maria Flytzani-Stephanopoulos

In August 2003, the Department was awarded a National Science Foundation/Nanoscale Interdisciplinary Research Team (NIRT) grant, entitled *A New Class of Oxidation Catalysts: the Role of Atomically Dispersed Metals in Nanostructured Oxides*. Dr. Maria Flytzani-Stephanopoulos serves as director and principal investigator of the four-year, \$1.23 million grant. The study fo-

cuses on using nanostructured gold doped cerium oxide catalysts for hydrogen generation for fuel cell applications.

Other Tufts faculty acting as co-Principal Investigators are Research Professor Howard Saltsburg (ChBE), Research Assistant Professor Regina Valluzzi (ChBE), and Professor Terry Haas (Chemistry). Dr. Jose Rodriguez, Senior Chemist at

Brookhaven National Laboratory, is a co-investigator.

The grant's outreach activities include training high school teachers in collaboration with the Dudley-Wright Center at Tufts, and establishing a series of Distinguished Lectures in Nanotechnology for advanced materials and catalysts, co-sponsored by the Department of Chemical and Biological Engineering.



Professor David Kaplan

Grant Establishes Tissue Engineering Resource Center

In August 2004, the National Institutes of Health awarded a \$4 million grant to Principal Investigator Professor David Kaplan and his collaborators for the establishment of a Tissue Engineering Resource Center at Tufts University.

The Center is designed to advance the fundamental basis and clinical aspects of tis-

sue engineering, to provide training for investigators and dissemination of scientific findings and new techniques. The expertise and facilities are focused on research, problem-solving and training for the biomedical community through an integrated systems approach to the challenges in tissue engineering.

The Center's current research is focused on *Protein Scaffold Designs to Control Stem Cell Differentiation; New Scaffolds for Tissue Engineering; Bioreactor Systems with Local Control of Cellular Environment and Signaling Capability; and Bioreactors with Real Time Nondestructive Imaging Capability*.

Department Honors Dr. Botsaris on his 75th Birthday

Current Research Professor and former Department Chair Dr. Gregory Botsaris will be honored at the Department's May 7 Symposium in celebration of his 75th birthday. Faculty, alumni, and current students are invited to attend the day-long Symposium, to be held at Cabot Auditorium on the Tufts campus.

The Symposium agenda features technical presentations from Dr. Botsaris' associates and former stu-

dents addressing relevant issues in the fields of Chemical and Biological Engineering. Alumni will have the opportunity to tour our current facilities during a catered lunch. The Symposium will be followed by an Alumni Dinner to be held in the Faculty Lounge.

Professor Botsaris joined the faculty of Tufts in the position of Assistant Professor in 1965. He served as Chairman of the Chemical Engineering Department

from 1983 to 1993. Dr. Botsaris retired in 2004 but remains active as Research Professor. This year marks his 40th year of distinguished service to the University.

Dr. Botsaris' specific research interests encompass crystallization, nucleation, precipitation, suspensions of solids in liquids, and general particulate systems. He has authored numerous papers and edited two books.



Professor Gregory Botsaris

Symposium for Gregory Botsaris: Featured Speakers

The Symposium will feature, among others, the following speakers:

- Dr. Richard D. Siegel, Senior Vice President of KERAMIDA Environmental, Inc., presenting "The Brave New World of Right to Know"
- Professor Ronald W. Rousseau, Chair of the School of Chemical &

Biological Engineering, Georgia Institute of Technology

- Dr. Mary Viola, Associate Director of the Gordon Institute, presenting "Disruptive Innovation in Digital Imaging"
- Dr. Kostas E. Saranteas, Director of Process Engineering at Sepacor, Inc., presenting

"Applied Crystallization Theory: New Tools and Old Lessons in Industrial Practice"

- Professor Dion Dionysiou, Department of Civil and Environmental Engineering at the University of Cincinnati, presenting "Exploring Room Temperature Ionic Liquids in Environmental Applications."

RSVP Information

If you are interested in attending, please respond before April 20. 3 Ways to RSVP:

- 1) Via E-mail: Joanna.huckins@tufts.edu
- 2) Via Phone: (617) 627-3900
- 3) Check the appropriate box on the right, indicate number of guests, and detach this portion of the newsletter. Address to:

Joanna Huckins
 Chemical and Biological Engineering
 Tufts University
 4 Colby Street Room 148
 Medford, MA 02155

An Alumni Dinner will follow the day-long Symposium. The dinner will cost \$30/person, payable ahead of time (preferred) or at the door, provided you have sent us an RSVP. Guests of alumni are welcome to attend.

- I will attend the Symposium in honor of Gregory Botsaris on Saturday May 7.
- I will attend the Alumni Dinner following the Symposium with _____ guests. Enclosed is my check for \$_____.

Event Details

Symposium:

- Saturday May 7
- 9:00 a.m.
- Cabot Auditorium, Tufts main campus

Alumni Dinner:

- Faculty Lounge
- \$30/person
- Guests welcome to attend

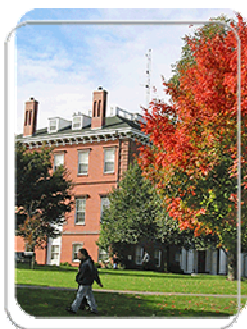


Tisch Library, Tufts University

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Tufts main campus

The Department of Chemical Engineering at Tufts University was established in 1901 and awarded its first Bachelor of Science degree in 1905, becoming one of only five colleges in the United States to develop a chemical engineering curriculum. In 2000, the Department was the first in the nation to recognize the evolving interdisciplinary nature of the field by changing its name to the Department of Chemical and Biological Engineering. In 2001, the Department celebrated its centennial.

Since 1990, the Department and its laboratories have been housed in the Science and Technology Center, a state-of-the-art research and teaching facility. Here, graduate students conduct innovative research encompassing biotechnology (genetic, metabolic, and cellular Engineering), biomaterials engineering, catalysis, membrane processes, polymers, colloids and surface science, and clean energy and environmental pollution prevention.

Alumni Survey: We want your news!

We would like to feature alumni news in future issues of our newsletter. Please provide the following information for the purposes of updating our alumni database and informing your classmates of any news you'd like to share.

1) Name:

2) Tufts degree(s)/Year:

3) Name of graduate school/
Degree/Year:

4) E-mail Address:

5) Mailing Address:

6) Phone Number:

7) Current Employer:

8) Current Title:

9) News you'd like to share
(promotions, marriages,
births, retirements etc.):

Please return this information to us via one of the following:

1. Fax: (617) 627-3991

2. E-mail:
Joanna.huckins@tufts.edu

3. Mail:

Alumni Updates
Attn: Joanna Huckins
Chemical and Biological Engineering
Tufts University
4 Colby Street, Room 148
Medford, MA 02155

TUFTS UNIVERSITY

Alumni Survey

(with more space to fill in)



We want your news! This is your chance to re-connect with your classmates and colleagues. We would like to revive the tradition of featuring alumni news in future issues of our newsletter. Please provide the following information for the purposes of updating our alumni database and informing your classmates of any news you would like to share. Surveys can be returned to the Department via e-mail, fax or mail using the contact information below.

Note: Please use this survey in lieu of the one published on page 4 of the newsletter. Thank you!

1. Name: _____

2. Tufts Degree/Year: _____

3. Name of Graduate School/Degree/Year: _____

4. E-mail Address: _____

5. Mailing Address: _____

6. Phone Number: _____

7. Current Employer: _____

8. Current Title: _____

9. News you'd like to share (*i.e., professional & academic accomplishments, marriages, births, retirements, etc.*):

PLEASE RETURN TO:

**JOANNA HUCKINS
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AND BIOLOGICAL
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