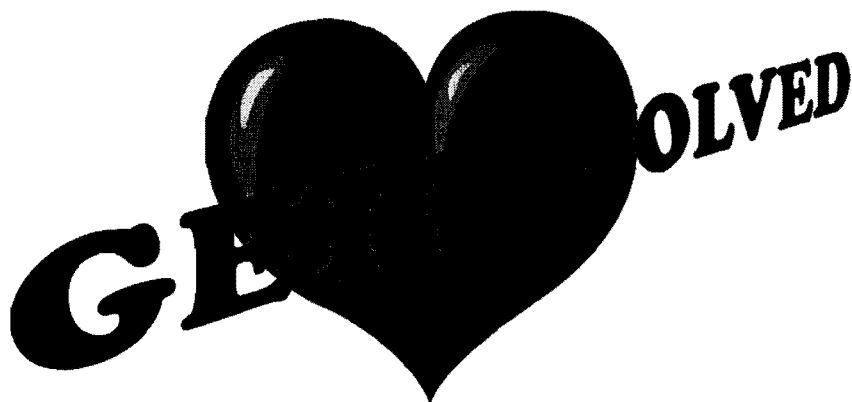


Chemical Bond

Volume 52
Number 2
February, 2001

St. Louis Section, American Chemical Society



*For ample opportunities
see Page 14*

The Department of Chemistry and the Chemistry Club
Announce the Twenty-Fifth Annual
William J. Probst Memorial Lecture

Dr. Purnendu K. Dasgupta

Professor of Chemistry and Biochemistry, Texas Tech University

Monday, February 26th, 2001

“Science and Scientists: Culpability and the passage of innocence”

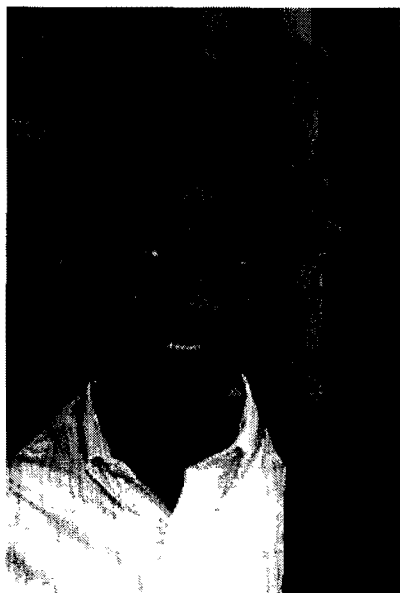
7:00 pm Meridian Ballroom, Morris University Center

Additional Probst Lecture Events
Include:

Student Research Symposium
Monday, February 26th, 2001
2 p.m. Meridian Ballroom,
Morris University Center

“Liquid Core Waveguides:
Poor Man’s Riches?”
Purnendu K. Dasgupta
Tuesday, February 27th, 2001
9:30 a.m. Science Building Auditorium
Room 1105

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The Department of Chemistry
Student Activity Fees



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at (618) 650-2042


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Chemical Bond

Volume 52

No. 2

February, 2001

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Meeting & Seminars

Board of Directors

St. Louis Section-ACS Board of Directors meets the second Thursday of each month at the Alumni Center, University of Missouri-St. Louis. Meetings are open to all members, and all are encouraged to attend. Elected officers and chairs of major committees have the right to vote; others in attendance have voice but no vote.

Date: February 8
Social hour: 5:30 pm
Dinner: 6:30 pm
Business meeting: 7:15 pm

Future meetings: Mar 8,
 Apr 10 (note Tuesday)

Saint Louis University

Seminars start at 3:30 pm in Room 204 Macelwane Hall. Refreshments follow. For more information, contact Dana Spence, spenced@slu.edu.

Wednesday, Feb 21
Charles Wilkie
 Marquette University
To be announced

University of Missouri-St. Louis

Refreshments at 3:45; seminars at 4 pm in B-451 Benton Hall. For further information, Contact Prof. Keith Stine, 314-516-5346, kstine@jinx.umsl.edu.

Monday, February 5
Dr. Eric Bosch

Southwest Missouri State Univ.
Explorations in Solid State Organic Chemistry and Coordination Chemistry

Monday, February 12
Dr. Jeffrey Long

University of California-Berkeley
Toward Molecular Data Storage: Directed Assembly of High-Spin Metal-Cyanide Clusters

Monday, February 19
Dr. Greg Lanza

Washington University School of Medicine
A Novel Nanoparticle System for Molecular Imaging and Targeted Drug Delivery

Monday, February 26
Dr. Christopher Viney

Heriot-Watt University
New Materials from the Zoo

Monday, March 5
Dr. Robert D. Gennis
 University of Illinois
To be announced

Monday, March 12
Dr. Zhe Wu

University of Missouri-Kansas City
New Unimolecular Initiator and Transition Metal Mediated Polymer Synthesis

Washington University

Seminars are in McMillen 311 at 4 pm unless otherwise noted. Coffee is available outside the seminar room 20 minutes prior to the talk, and refreshments follow.

Thursday, Feb 1
Dr. Thomas Hoye

University of Minnesota
To be announced

Tuesday, Feb 6

Dr. Matt McIntosh
 University of Arkansas
To be announced

Thursday, Feb 22

Dr. Matthew Shair
 Harvard University
To be announced

Computational Chemistry Discussion Group

The Computational Chemistry Discussion is temporarily coordinator-less. If you would like to become involved in this topical group, contact Program Committee Chair Jed White: phone (618) 462-3400, email jewwhite@siue.edu.

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Environmental Science/Technology Discussion Group

Contact Dr. Kwok-Keung Au ("Amos") for information: call 618-239-0547 or e-mail amos@bellevillelab.com

Women Chemists

All are welcome. Please join us for the:

5th Annual Women Chemists
 Brunch

Sunday March 25
 10:30am-1:30pm

History Museum, Forest Park
 Guest: Dr. Marion Thurnauer
 Director of Chemistry Division
 Argonne National Lab

RSVP by March 19 to Leah O'Brien
 (618-650-3562 or lobrien@siue.edu)
 Cost for brunch is \$12.

February

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			


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The Incredible Walking Tree

by Jack Bornmann

On the first full day of our vacation in Australia and New Zealand, Sandy and I saw "a famous walking tree."

We went to an island that is part of the Great Barrier Reef. As part of a walking tour, a naturalist pointed

Letters & More

out this peculiar looking tree. At shoulder height its trunk separated into roots that descended almost vertically to the ground before spreading out. About a foot above the point of merging of roots into trunk there was a small branch-like projection that the naturalist said could become a new root.

The tree is a fresh water tree. If the water table becomes salty, the tree shrinks the roots in the direction of the salt water and extends its roots toward the fresh water. New roots can form from little projections on the trunk. By withdrawing its roots on one side and extending them on the other, the tree can actually move, and the movement is sufficient that people with good memories would realize that the tree moved. I was looking at an example of something from that "second world," the slow moving world, that I discussed in the January issue of the *Chemical Bond*.

Incidentally, if the walking tree fails to move fast enough to escape the salt water, it dies. These trees move as though their lives depended upon it. Using good breed-

see *Walking Tree* page 8

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ing techniques or biotechnology the "famous walking trees" might become great racers. Perhaps they will be rated as "the four millenium mile" racers. (For many years the "four minute mile" seemed to be an insurmountable barrier for human runners until in 1954 Roger Bannister, an English runner, succeeded in running a mile in less than four minutes. That is 15 miles per hour.)

Editor's Note: a web quest for an illustration of a walking tree came up empty, as you can see. But there were numerous text sites describing "walking trees" in Africa, Central America, and even the US Atlantic coast. In Florida, the mangrove, which grows in salt or brackish water and does not perambulate, was called "walking tree" by natives, presumably be-

cause of the bowlegged growth habit of its roots.

There was also a transcript of an hilarious old Monty Python skit called "Walking Tree of Dahomey," not reprinted here without permission.

Finally, there were numerous sites dedicated to a completely unrelated topic: computer algorithms for "walking a tree," i.e., searching a tree data structure.

All in all, a fascinating 50-minute journey, though perhaps not quite up to the being-there experience of Jack and Sandy Bornmann. □

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Bond Briefs

From the Continuity Dinner

Recent heavy snow gave way to warm cheer at the annual Continuity Dinner on December 14. Y2K+1 officers were installed and assumed their duties. Karl Markl gave the Henry Godt Memorial Lecture, summing up the Section's accomplishments, giving credit to numerous active members who made the rich agenda of events possible. Former chair, retired but still active Jed White received the Distinguished Service Award.

One particularly newsworthy issue came up for discussion: should the complete minutes of Board meetings be published in the *Bond* and/or the website? The sense of the group — the result of the vote — was no. The minutes record much of the deliberation, pro and con, of some sensitive topics. While certainly not secret in any way, as the Board meetings are open to all members, the Board decided that only the highlights should be publicized.

What's a highlight? Well, that's certainly open to interpretation, but here's a stab: only the results of votes, not the discussion, and only issues of broad interest. Like this one.

Calling All Material Girls and Boys

The Materials Chemistry Group, formerly known as the Surface Science Group, is currently chair-less. If anyone is interested in leading the group into reactivity, the Chair position could be yours. If there is no interest, the group will be suspended for 2001 and perhaps indefinitely.

Please contact Sue Dudek if you are interested in this position.

Where Do You Belong?

Since you're reading this, we know you belong to the ACS and that you understand the value of participating in professional organizations. We're taking an informal survey to find out what other professional organizations our members belong to, and which ones might be interested in joint activities with ACS.

Please send the name(s) of your other professional organizations, and how we might contact the local or national office, to Lisa Balbes, lisa@balbes.com or 314-966-5298.

see Briefs page 14

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57th ACS Midwest Regional Award Request for Nominations


The Saint Louis Section established the ACS Midwest Regional Award in 1944 to publicly recognize outstanding achievements in chemistry in the Midwest region. The award is conferred annually on a scientist who has made meritorious contributions to the advancement of pure or applied chemistry, chemical education, and the profession of chemistry.

To be eligible, a nominee's cited work must have been performed while he or she was residing within the Midwest Region of the ACS, which includes Missouri, Arkansas, Iowa, Nebraska, Kansas, Southern Illinois, and South Dakota. However, the nominee does not have to be an ACS member. Neither the nominee nor the nominator has to currently reside in any of these locations. Nominees can be from industry, academia, government or private practice.

Nominations include a nominating letter, two or more seconding letters, a curriculum vitae, a brief biography, documented and objective information regarding the outstanding achievements of the nominee, and if the nominee is an academician, a list of persons who have received advanced degrees under his or her direction. Please submit nine copies of all nomination material to:

Leah O'Brien, Chair
Midwest Award Committee
Department of Chemistry
So. Illinois Univ.-Edwardsville
Edwardsville, IL 62026-1652

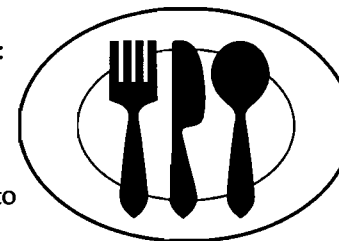
All nominations must be received on or before the deadline of March 31, 2001 to be considered for

the 56th ACS Midwest Award. The award will be presented at the 36th Midwest Regional Meeting in October, 2001. The ceremonies will feature the Midwest Award Lecture, a dinner honoring the medalist, and the presentation of the Award which shall be a medallion and a monetary award. Questions concerning the Midwest Award may be addressed to Leah O'Brien at (618)-650-3562 or lobrien@siue.edu. 

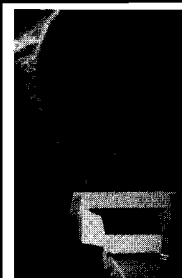
Recognition Night

New 50-year members honored,
presentation of the Distinguished Service Award,
Past Chair recognition and address.
Come for an enjoyable evening.

Date: March 10, 6:00 pm
Location: Glen Echo Country Club
3401 Lucas & Hunt Road
St. Louis, MO 63121
Cost of dinner: \$18.50
For reservations, contact:
Samir El-Antably
P.O. Box 50168
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Highly Selected Highlights from Pacifichem 2000

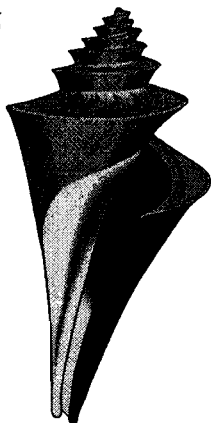
The pentennial meeting of the International Chemical Congress of Pacific Basin Societies, called Pacifichem 2000, was held in Honolulu, December 14-19. The Congress is jointly sponsored by the chemical societies of the USA, Japan, Canada, Australia, and New Zealand. Why such a meeting in such a venue would be held only every five years is beyond fathoming, but there it is.

Some of the highlights, gleaned and digested from ChemCenter News. The original articles are a good deal longer; if you are interested in more details, log onto center.acs.org/applications/news/default.cfm

Marine Natural Products Pioneer Fêted

Dr. Paul Josef Scheuer was honored for his pioneering work in marine natural products. Scheuer has been on the faculty of the University of Hawaii for 50 years and has received NSF grants to study marine natural products for the past 49 years. Thanks largely to Scheuer's research, the field of research is growing and gaining momentum, and the oceans may produce the next wave of treatments for a variety of incurable diseases.

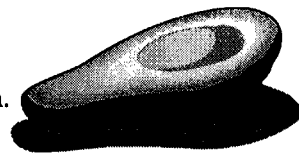
Kahalalide F, a euphonious potential cancer treatment Scheuer discov-



ered in a Hawaiian marine mollusk, entered human clinical trials for prostate cancer in Europe last year. KF (an unfortunately confusing acronym) may also be beneficial in treating lung and colon cancers.

Avocado for a Healthier Liver

Researchers at Shizuoka University, Japan, fed 22 different fruits to rats with liver damage induced by galactosa mine, a powerful liver toxin.



The avocado showed the most potent protective effect, according to the PIs, Hirokazu Kawagishi and Kimio Sugiyama.

"Besides offering taste and nutrition, avocados seem to improve liver health," says Kawagishi. "People should eat more of them."

The liver damage induced by galactosamine resembles that caused by viruses, suggesting that avocado extracts may be promising for the treatment of viral hepatitis, according to the researchers.

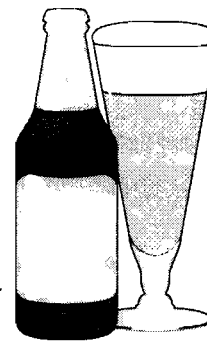
This Just Has to be True

Animal feeding studies applied to humans should often be taken with a grain of salt, but when the conclusions reinforce what you already want to do, it's tempting to swallow them whole and without condiments. For example...

Beer, in moderation, cuts your risk of cataracts and heart disease. Researchers in Canada and the United States presented results of animal studies showing that beer, especially the darker ales and stouts, may reduce the incidence of

atherosclerosis and cataracts by as much as 50 percent.

Dark beers have more antioxidants than light lager beers, according to Canadian researchers John Trevithick, and Maurice Hirst of the University of Western Ontario, and Joe Vinson of the University of Scranton.



Sea Urchins Save the Reefs from Killer Starfish

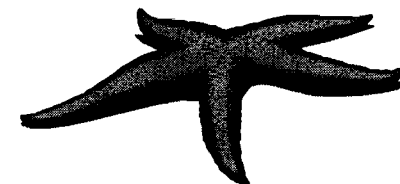
The crown-of-thorns starfish feasts on coral and is expanding in population. An estimated 27% of the world's coral reefs have already been destroyed, and starfish are a significant factor in the decline.

Researchers at Nagoya University discovered that sea urchins contain chemicals that attract starfish. They isolated the active

species, the unsaturated fatty acids arachidonic acid and α -linolenic acid, and used them to attract starfish to traps.

"Although we can't save all of the coral reefs in the world, our research is useful for saving some of them," says Daisuke Uemura, the study's lead researcher.

Traps seem a particularly low-tech pest control measure, but most previous attempts have been unsuccessful. Poisoning cannot be used because it harms other creatures that share the starfish habitat.



In a particularly misguided "bountyhunter" effort, south Pacific native islanders were paid to destroy starfish by cutting them into pieces. Trouble is, the pieces were thrown back in the water, and—you guessed it—each piece can regenerate a whole organism.▣

Two Chances

You have two (2) chances coming up in March to get involved in local chemistry outreach. Ask anyone who's been there: it's rewarding, fun, and less time-consuming than you might imagine. If either of these opportunities piques your interest, get in touch with Greg Wall, 800-325-5832 ext. 3139 or e-mail gwall@sial.com to express your support.

The St. Louis Public Schools' "Career Awareness Fair" (March 7-8) — Now in its 17th year, this successful and popular program brings 8th-grade students in St. Louis public schools in touch with real people in real careers. The take-home message for the kids: the relationship between academic skills and the work world. You can help by being there to tell the students about what you do and how you use what you learned in school.

"Sub4aday" (March 21-25) — The National Science Teachers' Association (NSTA) convention is in St. Louis, and science teachers will need substitutes in order to attend. Who among us hasn't dreamed about going back to our elementary or high school and playing the teacher, if only for a day? It could happen to you.

One More Chance: Judge at a Science Fair

Science Fair season is again upon us, and judges are needed for many local fairs. Our section

gives special awards to secondary level students with chemistry-related projects, while elementary students all receive ribbons. Judging one event takes only about two hours and is a great way to help our local schools. The dates for judging are:

- St. Charles/Lincoln County Science Fair: Monday, March 12, 6 pm
- Illinois Junior Academy of Science Region 12 Science Fair: Saturday, March 31, 9:30 am at SIU—Edwardsville
- Greater St. Louis Science Fair: Friday, April 13, 6 pm at Queeny Park, Greensfelder Pavilion
- Elementary fairs will be held on March 30 (Illinois) and April 9 (St. Louis).

If you are interested in helping with judging, please contact Alexa Serfis:

phone (314) 977-2842
or e-mail BARNOSKI@SLU.EDU

Women Chemists Luncheon

The Women Chemists host their 5th annual luncheon (this year, more of a brunch) on Sunday, March 25, from 10:30 am to 1:30 pm. As always, all are welcome.

This year, the event will be held at the St Louis History Museum in Forest Park, with guest speaker **Dr. Marion Thurnauer**, Director of the Chemistry Division at Argonne National Lab.

RSVP by March 19 to Leah O'Brien, 618-650-3562 or e-mail lobrien@siue.edu.

Cost for brunch is \$12. □

Job Hunting? Don't Just Mouse Around

A recent *Wall Street Journal* article suggested that job-hunting websites "can be useful, but don't count on them to do the whole job."

In a survey of 2,800 Internet users, only about 4% found their

Career Corner

latest job on the web. Instead, as Jerry Hook, who usually writes for this space, has often harped, "the majority of jobs are still found through networking."

Still, in the wired age, it's tempting to spend at least a piece of your job search effort on the web. Chemists may have something of a leg up on the average e-seeker. The

American Chemical Society's ChemCenter features active and of course, industry-focused Career Services, with recent job postings up-to-date and searchable, a résumé depository called the Professional Data Bank, access to career planning programs and publications, and much more. The ACS and CAS alone have over 40 openings posted (most for those looking to relocate to Washington, DC or Columbus, OH).

The whole experience at ChemCenter has improved recently, with much of interest to job-seeker and job-holder alike. Check it out at www.acs.org/careers



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