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# FUEL CHEMISTRY NEWS

## *Newsletter of the ACS Division of Fuel Chemistry*

Volume 78, No. 2

<http://www.anl.gov/PCS/acsfuel/>

Summer

1999

### Election 1999

It is again time for the election of Division officers. Please take this opportunity to let your vote be counted by electing new officers or re-electing current Division officers. These officers will serve the Fuel Chemistry Division in year 2000. Biographical information and statements from the two candidates for the Chair-Elect position begin in the next paragraph. The names and positions of the other nominees are listed on the ballot. Your ballots and two envelopes are enclosed in this issue. All Fuel Chemistry Division members are eligible to vote. Your vote is very important, so please complete and return your ballot to the Division Secretary, Caroline Burgess by Friday, August 20, 1998. For those of you who are overseas and may not receive this newsletter in time to vote by regular mail, please e-mail your vote to Caroline at [ceburge@ibm.net](mailto:ceburge@ibm.net), and be sure to put Election 1998 in the subject line of your e-mail message.

### Candidates for Chair-Elect

**Susan D. Brandes** has been working in the field of fuel science for 23 years. She earned a Bachelor of Arts degree in Chemistry from Swarthmore College and went to work at Mobil Oil Central Research Division in 1976. While at Mobil, she earned a Master of Science degree in Chemistry at Drexel University. She left Mobil to obtain a Ph.D. degree in Chemical Engineering at the City College of New York. It was there that she began working with/on coal. After earning her degree in 1986, she continued research activities with coal as an employee of the U.S. DOE at the Pittsburgh Energy Technology Center. In 1990, she left the DOE to join CONSOL (formerly Consolidation Coal Co.) R&D where she now holds the position of Sr. Research Engineer. Her research has encompassed tertiary oil recovery, anti-oxidant stabilizers for lubricating oils, coal pyrolysis, steam treatment of coal to enhance coal conversion, direct coal liquefaction, NO<sub>x</sub> reduction and related issues, and, recently, the field of fine particulate matter (PM<sub>2.5</sub>).

Sue has been a member of the Division of Fuel Chemistry since 1984. In that year she was awarded the Richard A.

Glenn Award for a paper given at the 187<sup>th</sup> National Meeting. In 1995, she became the Director of Advertising for the Division. She resigned from that position after three years of service, in which she expanded the advertising into the Newsletter and increased the annual advertising revenues by almost 300%. She has been a session co-chair for the Division and a session chair for the 25<sup>th</sup> Central Region ACS Meeting. She also has served as Program Chair and Chairman of the Coal Technology Group, a long-lived and active group of the Pittsburgh Section of the ACS. In her capacity as Program Chair and Chairman of the Coal Tech Group, she served a disparate group of members and member's interests for two years. She is a member of the American Institute of Chemical Engineers and Sigma Xi

### **Sue's Statement**

I have participated in the three facets of fossil fuel research in the United States for the last 23 years. I have been an employee of industry, academia, and government. I have the added experience of carrying out industrial research with government funds. As such, to paraphrase the song 'I've seen it from all sides now.' I know first-hand how severely programs in fossil fuel research have been cut in recent years. The facility I worked at in the 1970's no longer exists, direct liquefaction is *persona non-grata*, and the current trend is to look for quickly developable process technology with minimal fundamental research. The question that looms is "How can the Fuel Division help?" How can it address the concerns of its members and at the same time deal with its key issues? Is the Division strong and will it remain so, or does it need an infusion of new members, new topics, and new money?

Key issues which face the Division at this time are the potential merger with the Petroleum Chemistry Division and the related topic of shrinking membership, globalization of information from the Division, improved recognition of the Division globally, and the public image of coal, coal science, and coal-related technologies. (Perhaps the last phrase should be replaced by fossil fuel, fossil fuel science, and fossil fuel-related technology.)

Is this all that the Division should be concerned with? Will addressing these topics lead to a strong and healthy Division, able to be a forum for fossil fuel science in the next century? I strongly believe that the job of chairman is to raise questions; ask the hard ones and find the right people from whom to get the answers.

I believe that the health of the Division rests on all the members; the larger the membership and the more diversified, the more robust the division will become and the better it will weather the future ups and downs related to fossil fuel science funding. Environmental issues go hand-in-hand with fossil fuel issues. Funding sources traditionally available for fossil fuel research and the Division (those that sponsored symposia, awards, etc.) have turned their resources to the environmental aspects of fossil fuels research. The Division has done a good job of working with the Environmental Chemistry Division, putting together joint symposia over the last several years. It is not enough. We must create stronger ties to the Environmental Chemistry Division. We also should look into other resources within the ACS to attract a wider audience with the potential of increasing our membership. Relationships should be fostered with, for example, the Divisions of Analytical Chemistry, Industrial & Engineering Chemistry, Chemistry and the Law, and especially Chemical Education.

The recent surveys sent out to poll the members of the Fuel and Petroleum Chemistry Divisions about merger met with, at best, what could be described as a mediocre reaction. I believe this should not be interpreted as apathy about the future of fossil fuel science, but more about apathy for the Division. It raises yet another question of whether the membership believes the Division is non-representative of their concerns. If this is true, this perception needs to be changed. As much as we must educate the general public that fossil fuel research and the people who do it are a boon to them not a necessary evil, we must assure our membership that the Division is here to represent them and promote their work, providing a fair and open forum for its presentation and discussion.

Most of the issues I raise are covered in the Division's existing long-term strategic plan developed for the Division several years ago. The plan is intended to be fluid and adaptable to the ever-changing landscape of politics, funding, and science. The job of chairman is to see that the Division can respond to those changes, retain its core values, and remain strong into the twenty-first century.

**Parviz Rahimi** is a chemist /senior research scientist with The National Center for Upgrading Technology (NCUT) of the

Department of Natural Resources Canada. The mission of NCUT, which is a joint Federal-Provincial research organization, is to advance technologies for converting heavy oils and oil sands to transportation fuels and value-added products. For the past 18 years, Parviz has been active in the areas of fundamental understanding of upgrading chemistry including coal liquefaction, coprocessing, and bitumen/heavy oil conversion. His research interests include characterization of complex hydrocarbon mixtures, development of new analytical techniques, molecular transformation in upgrading, fuel stability, and chemistry of asphaltenes.

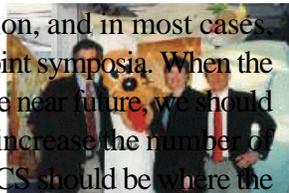
Parviz obtained his B.Sc. degree in Chemistry from Tehran University in Iran before coming to Canada in 1972. He subsequently received his M.Sc. from Brock University and Ph.D. degree in Physical Organic Chemistry from the University of Alberta. He joined CANMET in Ottawa in 1981 to work on the development of coprocessing as an extension of CANMET Hydrocracking process. In 1995 he moved to Alberta to join the NCUT group and work on the development of new or on the modification of the existing upgrading technologies for the conversion of oil sands bitumen and heavy oil to transportation fuels. He has authored many publications and has presented his work at the national and international meetings. Parviz served as program co-chair in 1998.

### **Parviz's Statement**

During the last number of years that I have been active in the Fuel Chemistry Division and attended the Executive Committee meetings, I realized that the commitment, dedication, and the team work of each member have been the reasons for the success of the division. My involvement in the division as Program Chair made me aware of a number of issues that are important for the continued success of the division. We should continue having diversified symposia that result not only in an increase in the number of attendees but also in having more joint symposia with the other divisions. We should have a strong membership committee for recruiting new and younger chemists and engineers.

The recent increase in oil price has once more revived significant interest in the upgrading of the "bottom of the barrel." Therefore, we should expect an increase in funding by governments and oil companies supporting R&D in fuel chemistry. The production of synthetic crude oil (SCO) from oil sands and heavy oils is expected to increase significantly by the year 2005. The increased production will be mostly through thermal processes (coking and hydrocracking). Because of Strategic programming and symposia diversification at the Fuel Chemistry Division in recent years, this division has addressed many scientific issues related

to the upgrading chemistry of hydrocarbon conversions. Working closely with the Petroleum Chemistry Division in the area of programming, we avoided duplication, and in most cases, complimented each other by having joint symposia. When the two divisions are officially joined in the near future, we should be able to attract new members and increase the number of attendees. This new division of the ACS should be where the petroleum/fuel scientists from all over the world would first present their innovative ideas and publish their new findings.



Finally, another important area that the division should focus on is the environmental issues related to both the production and utilization of fuels. Due to the stringent environmental regulations future fuels must be cleaner in terms of containing less sulfur, nitrogen and aromatic compounds. These regulations have created new opportunities and challenges in fundamental research such as Cetane improvement of diesel fuels by aromatic ring opening. Therefore, the division should encourage research and organize joint symposia with other divisions related to environmental issues.

### **Message from the Chair**

As we head towards our New Orleans activities, let me bring you up to date on the latest divisional news. First of all, I'm sure that many of you are curious about the results of the survey taken last Spring concerning a potential merger with the Petroleum Chemistry Division.



The survey results indicate that: (1) there is no clear consensus on any of the questions posed except for one - on the basic issue of whether or not to merge the clear vote is to proceed. With 112 responses returned (which is an acceptable 12% survey return rate), 74% call the merger either a great or good idea. The remainder say it's either a bad idea (7%), to proceed only if necessary for survival (16%), or don't care (or didn't answer) (3%). (2) There is no clear "winner" in the preprint format debate (Fuel = 42, Petr = 40). Some people like the smaller size of Fuel's but the legibility of Petroleum's and unfortunately these two features are just about diametrically opposed. (3) The membership is not ready to go to an exclusively on-line preprint format just yet (yes = 47, no = 48), though we have created a task force to examine web-based publication of the preprints because many members would like both options to be available. (4) Some very good ideas were in the comments to preprint and general issues, and the board shall take them all under serious consideration. PETR's surveys were distributed in their June newsletter. If their responses come back with different results then naturally we will have to step back and re-take stock.

Finally, the 6 "chairs" (current, past, and chair-elect) of the two divisions met once again in Anaheim to discuss progress. Geoff Dolbear of PETR is beginning to prepare a "pro forma" document of what a merged division might look like, and we shall keep you posted on that. We will once again have a joint dinner with PETR in New Orleans and plan to continue this function into the foreseeable future.

In other news, FUEL has been selected as one of two finalists for the ChemPower 99 Award, which is a membership drive award worth \$1,500. The winner will be announced during the ChemLuminary Awards Ceremony in New Orleans, where Grassroots, Phoenix, Public Outreach, and various other awards will be announced. Semih Eser, our Membership Chair, filed the report that allowed us to be in the running and has offered to put together a poster for us that will be included in the ChemLuminary events. Others to be recognized for this nomination are: Don Cronauer, our Director-at-Large who has instituted successful foreign liaison "chapters" for us; Tony Lizzio, our newsletter editor who started a new member column; Phil Britt, our Treasurer who put together the facts for the report; and finally our Program Chairs (Parviz Rahimi and Jim Franz) and their symposium organizers for putting together outstanding programs that attracted those new members.

Those who agree to organize symposia for our technical programming in national meetings are really the backbone of our society. With good symposia our technical program benefits, which in turn attracts members (both new and old), and results in valuable preprints for everyone, including those members which cannot attend the meetings. If any of you have ideas for symposia please consider volunteering as a symposium organizer. Frank Huggins has put together an outstanding program for 2000 as part of the ACS millennium celebration. Look for details on 2000-2002 programs later in this newsletter.

I look forward to seeing as many of you as possible in New Orleans. Enjoy the city, our technical program, join us for the division dinner Tuesday night, and stop by the FUEL desk to catch up on the latest division information.

Kathleen A. Carrado, Chair  
ACS Fuel Chemistry Division

### **Highlights of Anaheim Meeting**

The Fuel Chemistry Division Program included six symposia and a general papers session. The symposium, "Bioprocessing

for Fuel Quality Improvement" was organized by Heather Dettman and Robert Shong. The symposium presented current work in biocatalytic upgrading of fuels. Notable topics included biocatalytic ring cleavage of dibenzothiophenes and polynuclear aromatic hydrocarbons, and process considerations in the biodesulfurization of crude oils.

Ilham Derrin and Subhash Bhagwat organized the symposium, "Worldwide Fossil Fuel Demand and Production for the 21st Century". In this strongly attended symposium, authorities in fossil fuel supply and utilization reviewed the state of fossil fuel supplies and appropriate technology for the evolving fossil energy resource base.

Robert Evans and Phillip Britt organized the symposium, "Chemistry of Renewable Fuels and Chemicals". Highlights of the symposium included perspectives on the production of chemicals from renewable feedstocks (biomass), as well as fundamentals of the chemistry of biomass-related organic structure. Papers presented current technology related to be carbohydrate and lignin conversion processes, including the production of high octane fuel additives.



A very successful and strongly attended symposium, "Role of Water in Organic Reactions", was organized by George Cody and Mike Lewan. In recent years, the unique properties of water under high temperatures and pressures both in natural environments, such as in ocean floor volcanic vents, and in applications in chemistry and engineering, such as steam enhancement of oil recovery, have been recognized. The importance of aqueous pyrolysis was underscored in presentations addressing organic mechanisms of aqueous thermolysis of hydrocarbons, including the evolution of bioprecursors of amino acids and related structures in the prebiotic earth environment. In addition to the chemistry of evolution of organic structure in the aqueous environment, papers addressed the cooperative role of water and saturated hydrocarbons in hydrogen transfer and exchange under extreme aqueous environments.



A notable highlight of the Division Program was the Storch Award Symposium. The Storch Award of the Fuel Chemistry Division, sponsored this year by the Fuel Chemistry Division was awarded to Professor Eric M. Suuberg, for distinguished contributions to the field of coal science and pyrolysis chemistry. Eric's creativity and insights have inspired many students, collaborators and peers in the field. We again congratulate Eric for his achievements and their broad influence on fuel science.

The Program Chair of the Fuel Division for 1999, J.A. Franz, thanks the organizers for their hard work in organizing these very successful symposia.



### **R.A. Glenn Award**

In 1956, the ACS Fuel Chemistry Division, in cooperation with Bituminous Coal Research, Inc., established an award to recognize the best paper presented at Division Symposia. In 1972, the award was named in honor of Richard A. Glenn, who served as Assistant Director of Research at Bituminous Coal Research, Inc. and as Chairman of the Fuel Chemistry Division in 1960. All papers presented at Fuel Chemistry Division symposia are eligible for this award. Session chairs review the papers in their sessions and select about one paper for every ten submitted they feel are most innovative and interesting. A selection committee then carefully reads all these papers and attends their presentations at the meeting. Based on the oral presentation, technical subject matter, and the quality of the preprint, the committee selects the paper to receive the R.A. Glenn Award.



Excellent symposia and papers were presented at our last meeting in Anaheim. The Glenn Award Committee chose the paper "Hydrothermal Decarboxylation of RCOOH Studied in Real-Time by Vibrational Spectroscopy (Vol. 44, p. 340)," authored by Thomas B. Brill, Alec J. Belsky, and Patrick G. Maiella of the Department of Chemistry, University of Delaware to receive the Glenn Award for the Best Paper presented at the Fuel Chemistry Division Anaheim symposia. The Committee extends their warm appreciation and congratulations to the authors for their contribution to the quality of the Fuel Chemistry Division technical program. The Award plaques and a \$500 check will be presented to the authors at the Joint Fuel/Petroleum Division Dinner at the New Orleans ACS Meeting, Tuesday, August 24, 1999. In addition, each author will be provided with a free ticket this dinner.

### **NEW ORLEANS, AUGUST 22-26, 1999**

#### **New Orleans Program At-A-Glance:**

Organization of the Fuel Chemistry Division at the 218th National Meeting of the American Chemical Society in New Orleans, August 22-26, 1999 is complete. Approximately 130 papers will be presented in six symposia and a General Papers session:

#### Sunday, August 22

- *Chemistry of Reactive Intermediates and Modeling in Hydrocarbon Conversion (PHYS)*
- *Molecular and Network Structures of Coal*

#### Monday, August 23

- *Chemistry of Reactive Intermediates and Modeling in Hydrocarbon Conversion (PHYS)*
- *Molecular and Network Structures of Coal*
- *IGCC Process Science and Technology*
- *Sci-Mix Poster Session*

#### Tuesday, August 24

- *Chemistry of Reactive Intermediates and Modeling in Hydrocarbon Conversion (PHYS)*
- *Resid Characterization and Upgrading*
- *Fuel Division Business Meeting*
- *Divisional Dinner*

#### Wednesday, August 25

- *Resid Characterization and Upgrading*
- *Hydrogen Production, Storage and Utilization*

#### Thursday, August 26

- *Hydrogen Production, Storage and Utilization*
- *Recent Advances in Fuel Cells*
- *General Papers*

The "Chemistry of Reactive Intermediates..." Symposium will include presentations by authorities in thermochemistry, chemical kinetics, and modeling, including approaches in modeling ranging from novel methods for petroleum conversion modeling to the most advanced methods in first-principle approaches to transition state theory, solvation, and applications of advanced ab initio methods to catalysis. The Symposium "Molecular and Network Structures of Coal" will provide an update on coal structure. The Symposium "Hydrogen Production, Storage and Utilization" and its closely related symposium, "Recent Advances in Fuel Cells" will provide policy perspectives as well as new science and technology in this important emerging technology area. The "Resid Characterization and Upgrading" symposium will explore this area of broad importance to fuel processing. The "Integrated Gasification Combined Cycle (IGCC) Process Science and

Technology" symposium will update the status of commercial demonstrations in the U.S. and abroad as well as specific process developments such as optimized coal use and hot gas cleanup. As a whole, the symposia will provide both leading edge fundamental science and processing perspectives in areas of broad interest to fuel science. We look forward to strong participation in the symposia.

The Fuel Chemistry Division is also co-sponsoring the symposium "Applications of NMR to Complex Systems" (with GEOC, POLY, and I&EC). The Fuel Division gratefully acknowledges grant support by the ACS Petroleum Research Fund for two New Orleans Symposia, "Reactive Intermediates and Modeling..." and "Molecular and Network Structure of Coal". The Fuel Division also gratefully acknowledges a grant from ACS Corporation Associates the symposium, "Reactive Intermediates and Modeling in Hydrocarbon Conversion."

The Fuel Chemistry Division will be participating in the ACS Sci-Mix poster session, 7-9 PM Monday Evening, August 23. Fourteen papers were contributed from the Fuel Chemistry Division as candidates for the Glenn Award of the Fuel Chemistry Division. Please attend to lend them your support and to view the representative sampling provided by other divisions. In addition to technical programming, opportunities for more social interactions with your fellow division members will also be provided. Fuel and Petroleum Division Members are invited to attend the **Fuel/Petroleum Division Dinner** on Tuesday evening, August 23. The Social Hour (cash bar) will start at 6:00 pm and the dinner will commence at 7:00 pm. The price of the joint dinner will be \$40, with tickets available at the Fuel Division desk. Fuel Division members are also invited to attend the **Fuel Division Business Meeting**, at Tuesday Noon. Please visit the Fuel Division desk whenever you can. It will be stationed near the technical meeting rooms. There you can receive information regarding membership, future meetings and symposia, preprints and other division activities.

### Symposia at Future Meetings

The symposia and session chairs for future National Meetings are listed on the second to last page of this newsletter. There is still room for several more good symposia at our future meetings. Do you know of a good topic for a Fuel Chemistry symposium? Would you like to be a Symposium Chair? Do you know someone else who might be a good candidate? Please help identify these individuals to use their talent for the further advancement of the Division. Please contact one of the Executive Committee members if you or anyone you know would be interested in organizing a symposium.

## LAS VEGAS, March 26-31, 2000

Program Chair: Frank E. Huggins, 533 South Limestone Street, Suite 111, University of Kentucky, Lexington, KY 40506, 606-257-4045, fax 606-257- 7215, fhuggins@engr.uky.edu.

Deadline for submission of Abstracts: Oct. 15, 1999.  
Deadline for submission of Preprint Papers: Nov. 15, 1999.

**Fuel Science in the year 2000 - "Where do we stand, where do we go from here?"** (An ACS Y2K Celebration Symposium). Gerald P. Huffman, 533 South Limestone St., Suite 111; University of Kentucky, Lexington, KY 40506-0043. 606- 257-4027; fax 606-257-7215; cffls@pop.uky.edu

**Advances in Fischer Tropsch Chemistry** (jointly, with Div. of Petroleum Chemistry) Burton H. Davis, University of Kentucky Center for Applied Energy Research, 2540 Research Park Drive, Lexington, KY 40511. 606-257-0251; fax 606- 257-0302; davis@caer.uky.edu; and James B. Kimble, 370A PL, PRC, Phillips Petroleum Company, Bartlesville, Oklahoma 74004, 918-661-3248; fax 918-662-1097; jbkimbl@ppco.com.

**Molecular Modeling of Solid Fuel Reactions**, Ljubisa R. Radovic, Energy and Geo-Environmental Engineering Department, The Pennsylvania State University, 205 Hosler Building, University Park, PA 16802. 814-865-3248; fax 814-865-3075; lrr3@psu.edu; and Dr. Takashi Kyotani, Institute for Chemical Reaction Science, Tohoku University, Katahira, Sendai 980-8577, Japan, 81-22-217-5626, kyotani@icrs.tohoku.ac.jp.

**Application of X-ray and Neutron Methods to Complex Systems in Energy & Fuels Science.** K.A. Carrado, CHM/200, 9700 South Cass Avenue, Argonne National Laboratory, Argonne, IL 60439-4831. 630- 252-7968; fax 630-252-9288; kcarrado@anl.gov; and Katsuyasu Sugawara, Faculty of Engineering and Resource Science, Akita University, Tegata, Akita, 010-8502, Japan, voice & fax +81-18-889-2748, katsu@ipc.akita-u.ac.jp.

**PM and Fossil Fuel Combustion** (provisional title). T. J. Feeley, III, DOE FETC, P.O. Box 10940, MS 922-337, Pittsburgh, PA 15236. 412-892-6134; fax 412- 892-5914, feeley@fetc.doe.gov.

**Solid Fuel Chemistry**, contact: Frank Huggins

**Chemistry of Liquid and Gaseous Fuels**, contact: Frank Huggins

**Storch Award Symposium** (to be awarded and arranged).

**General Papers**, Frank Huggins.

## WASHINGTON, D.C., August 20-25, 2000

Program Chair: Frank E. Huggins, 533 South Limestone Street, Suite 111, University of Kentucky, Lexington, KY 40506, 606-257-4045, fax 606-257- 7215, fhuggins@engr.uky.edu.

Deadline for submission of Abstracts: Apr. 15, 2000.  
Deadline for submission of Preprint Papers: May 15, 2000.

**1990 Clean Air Act Amendments - A Ten-Year Assessment**, J. J. Helble, University of Connecticut, Department of Chemical Engineering, U-222; Storrs, CT 06269-3222. 860- 486-4602; fax 860-486-2959; helble@eng2.uconn.edu

**Inorganics in Fossil Fuels, Waste Materials, and Biomass - Characterization, Combustion Behavior, and Environmental Issues.** C. L. Senior, Physical Sciences, Inc., 20 New England Business Center, Andover, MA 01810-1077. 978-689-0003; fax 978-689-3232; senior@psicorp.com

**Waste Material Recycling for Energy and Other Applications.** S. V. Pisupati, Energy and Geo-Environmental Engineering Department, The Pennsylvania State University, 124 Hosler Building, University Park, PA 16802. 814-865-0874; fax 814-863-8892; sxp17@psu.edu

**CO<sub>2</sub> Capture, Utilization, and Sequestration.** R. Warzinski, USDOE/FETC, Box 10940, Bldg 83-324; Pittsburgh, PA 15236, 412-892-5863; Robert.Warzinski@fetc.doe.gov

**Production of Fuels and Chemicals from Synthesis Gas.** D.B. Dadyburjor and E.L. Kugler, Department of Chemical Engineering, P.O. Box 6102, West Virginia University, Morgantown WV 26506-6102. 304-293-2111 x 2411; fax 304-293-4139; dadyburjor@cemr.wvu.edu

**Solid Fuel Chemistry**, Contact: Frank Huggins

**Chemistry of Liquid and Gaseous Fuels**, Contact: Frank Huggins

**General Papers**, Frank Huggins.

## **SAN DIEGO, April 1-5, 2001**

**Program Chair:** Sarma V. Pisupati, 124 Hosler Building, Penn State University, University Park PA 16802, 814-865-0874, fax 814-865-3248, [sxp17@psu.edu](mailto:sxp17@psu.edu).

**Reaction Mechanisms in Fuel Processing,** Phillip F. Britt, Chemistry Division, Oak Ridge National Laboratory, P.O. Box 2008, MS-6197, Oak Ridge, TN, 37831, 423-574-5029, fax 423-576-5235, [brittpf@ornl.gov](mailto:brittpf@ornl.gov).

**Coal Bed Methane,** Promod C. Thakur, Consol Inc., R&D, 1027 Little Indian Creek Rd., Morgantown, WV 26501, 304-983-3207, fax 304-983-3209, [Promodthakur@consolcoal.com](mailto:Promodthakur@consolcoal.com).

**Nitrogen Chemistry in Coal Utilization,** Marek A. Wójtowicz, Advanced Fuel Research, Inc., 87 Church Street, East Hartford, CT 06108, 860-528-9806 ext. 142, fax 860-528-0648, [marek@AFRinc.com](mailto:marek@AFRinc.com).

**Hydrogen Energy,** Rashid Khan, Texaco Inc., P.O. Box 509, Beacon, NY 12508, 914-838-7639, fax 914-838-7102.

**Argonne National Lab Premium Coal Sample Data Base,** Karl Vorres, 27 Windward Circle, Willowbrook, IL 60514, 630-325-0931 (between Nov. 11 and April 15: 3432 North Applewood, Tucson, AZ 85712, 520-322-5256, [ksvorres@flash.net](mailto:ksvorres@flash.net)).

**Carbon Products for Environmental Applications,** Tony Lizzio, Illinois State Geological Survey, 615 East Peabody Drive, Champaign, IL 61820, 217-244-4985, fax 217-333-8566, [lizzio@geoserv.isgs.uiuc.edu](mailto:lizzio@geoserv.isgs.uiuc.edu).

**CO<sub>2</sub> Capture and/or Utilization,** Contact: Sarma Pisupati.

**General Papers,** Sarma V. Pisupati.

## **CHICAGO, August 26-31, 2001**

Program Chair: Sarma V. Pisupati, 124 Hosler Building, Penn State University, University Park PA 16802, 814-865-0874, fax 814-865-3248, [sxp17@psu.edu](mailto:sxp17@psu.edu).

**Cofiring Or Co-Processing Coal And Biomass,** Contact: Sarma Pisupati..

**Fuel Cells,** Contact: Sarma Pisupati.

**Coal Gasification At High Pressure,** Contact: Sarma Pisupati.

**Computer modeling in Fuel Chemistry,** Contact: Sarma Pisupati.

**Fine Particulate (PM<sub>2.5</sub>) Formation and Emissions from Fuel Combustion**, Curt M. White, Federal Energy Technology Center, Mail Stop 94-212, P.O. Box 10940, Pittsburgh, PA 15236, Pittsburgh, 412-892-5808, fax 412-892-4158, cwhite@fetc.doe.gov; André L. Boehman, 114 Hosler Building, Penn State U, University Park PA 16802, 814-865-7839, fax 814-865-3248, alb11@psu.edu.

**General Papers**, Sarma V. Pisupati.

**ORLANDO, April 7-11, 2002**

Program Chair: Robert P. Warzinski, U.S. Department of Energy, Federal Energy Technology Center, P.O. Box 10940, Pittsburgh, PA 15236; 412-892-5863, fax 412-892-4152, warzinsk@fetc.doe.gov.

**Trends in Carbon Products**  
**Production and Utilization of Renewable Fuels**  
**CO<sub>2</sub> Capture and Sequestration**  
**Utilization of Greenhouse Gases**  
**Hydrogen Production and Utilization**  
**General Papers**

**BOSTON, September 8-12, 2002**

Program Chair: Robert P. Warzinski, U.S. Department of Energy, Federal Energy Technology Center, P.O. Box 10940, Pittsburgh, PA 15236; 412-892-5863, fax 412-892-4152, warzinsk@fetc.doe.gov.

**Monitoring and Control of Air Toxics**  
**Separation and Utilization of Coal Combustion By-Products**  
**Novel Fuel Cycles/System Integration**  
**Computational Chemistry for Fuel Science**  
**Gas Hydrates**  
**General Papers**



## **Other Conferences and Symposia of Interest**

**7<sup>th</sup> Annual International Activated Carbon Conference** will be held in Pittsburgh, PA on September 16-17, 1999. Abstracts should be submitted to Dr. Henry Nowicki, PACS Inc., 409 Meade Dr., Coraopolis, PA 15108, 412-457-6576, fax 412-457-1214 hnpacs@aol.com.

**Consortium for Premium Carbon Products from Coal** will hold its next meeting on October 25-26, 1999 at the Lakeview Scanticon located near Morgantown, West Virginia. For further details on how you can become a CPCPC member and attend this meeting contact Frank Rusinko, Director of CPCPC, 814-863-8892, fjr4@psu.edu or Joel Morrison, Program Logistics, 814-865-4802, jlm9@psu.edu.

**2<sup>nd</sup> Pacific Basin Conference on Adsorption Science and Technology**, May 14-18, 2000, Brisbane Australia, <http://www.uq.edu.au/apc/>.

**3<sup>rd</sup> Asia Pacific Conference and Exhibition on Sustainable Energy and Environmental Technology** will be held on May 28-31, 2000 in Hong Kong, China. The conference is organized by the Hong Kong University of Science and Technology. For more information please contact: Professor Po Lock Yue, Department of Chemical Engineering, Hong Kong University of Science and Technology, keplyue@usthk.ust.hk, <http://www.ust.hk/~webceng>.

### **New Consortium for Premium Carbon Products from Coal (CPCPC)**

Established in June 1998, the CPCPC is focused on the development, commercialization, and promotion of technologies needed to produce value-added carbon products from coal and coal-derived feedstocks. The CPCPC is a unique, industry-driven consortium whose members propose research initiatives in areas they identify as being strategically important to the coal and carbon/graphite industries. CPCPC is currently comprised of 43 members, which represent a broad array of industries such as: anthracite and bituminous coal producers, manufacturers of specialty carbon and graphite products, activated carbon producers, municipally owned water treatment facilities, anthracite filter media producers, carbon fiber and composite producers, aluminum producers, carbon black and coal tar pitch producers, battery manufacturers, coal-fired utilities, firms specializing in coal cleaning and plant construction, and academia.

The CPCPC is being led by the The Pennsylvania State University, West Virginia University, and the Department of Energy's Federal

Energy Technology Center. Each CPCPC member appoints one representative to an Advisory Committee, which serves as a steering committee for the consortium. The Advisory Committee is responsible for electing a seven member Industrial Council that evaluates and selects those research projects thought to be of most benefit to the CPCPC membership.

Projects are solicited from among the CPCPC membership. Each member is eligible to submit projects and compete for financial support. Projects require a 50% cost share. The organizational structure of the CPCPC ensures that the consortium is industry-driven. Industry identifies, selects, and partially funds projects that it deems as having a near term potential for producing competitively priced premium carbon products from coal or coal-derived feedstocks.

The CPCPC is currently funding eight projects that have a total project cost of \$1.045 million. These projects were selected for funding at the March 1-2, 1999 meeting held in State College, PA. Projects included:

- coal-to-granulated activated carbon (GAC) for water treatment,
- production of low cost carbon fibers from coal precursors (3 projects),
- production of specialty graphite from anthracite,
- production of coal pyrolysis tar for carbon black feedstocks,
- recovery and activation of devolatilized bituminous coal chars from coal-fired power plant ash,
- survey of value-added carbon product markets.

### **Welcome New Fuel Chemistry Members**

At the Anaheim meeting last summer, 22 new members joined the Fuel Chemistry Division. We wish them a warm welcome. The current membership is now 897.

Ron Hill, Exxon Production Research Company, TX  
Deborah Schulman, Hawaii Natural Energy Institute, HI  
Yixian Xiao, Exxon Production Research Company, TX  
Raymond Michels, Vandoeuvre Les Nancy, FRANCE  
Liz Gron, Hendrix College, AR  
Ray Yang, West Virginia University, WV  
Tamura Hiroshi, Kansai University, JAPAN  
Jin Yoo, Flossmoor, IL  
Dennis Tanner, University of Alberta, CANADA  
Sunita Satyapal, United Technologies, CT  
Heather Dettman, Alberta, CANADA  
T.F. Brownscombe, Houston, TX

Abhijeet Borole, ORNL, TN  
 Yevgenia Briker, Alberta, CANADA  
 Bashir Dabbousi, Saudi Aramco, SAUDI ARABIA  
 William Genetti, Baton Rouge, LA  
 S. Halim Hamid, KFUPM, SAUDI ARABIA  
 Peter Lau, Biotechnology Research Inst., Montreal, Canada  
 Robert Shong, Houston, TX  
 Hideyuki Tagaya, Yamagata, JAPAN  
 Eiichi Takeshita, Yokohama, JAPAN  
 John Winslow, US DOE, PA

## **Member Benefits**

The Division of Fuel Chemistry provides a forum for presentation and discussion of fuels-related chemistry research and development. The Division is also concerned with public policy issues related to energy and fuels, such as the environmental impacts of fuel use and the evaluation of options for resource utilization (e.g., fuel, chemical or material). Division programming has remained strong in the traditionally important areas of the utilization of coal, natural gas, and alternative fuels and feedstocks. Programming is being increased in areas associated with the environmental effects of fossil fuel use, energy and fuel production from biomass and waste, bioprocessing of fuels, recent developments in fuel cells and batteries, and the production of high-value materials and chemicals from fuels. Member benefits include: programming at national and regional meetings, co-sponsorship of symposiums with other Divisions, e.g., Petroleum and Environmental Chemistry Divisions; Fuel Chem News (sent prior to each national meeting); preprints of all technical papers mailed prior to each National Meeting (four issues per year); Energy & Fuels; home page on World Wide Web <http://www.anl.gov/PCS/acsfuel/>; Henry H. Storch Award for distinguished contributions to fuel science or engineering, R.A. Glenn Award for the best paper at a National meeting, Distinguished Service Award for sustained and distinguished contributions to the field of fuel chemistry; and discounts on ACS symposium series publications and student subscriptions to Energy & Fuels.

## **Advertise Here!**

Dr. Jonathan Mathews is our new Director of Advertising. To place an ad here, please contact Jonathan at 814-863-6213, fax 814-865-3248, or [jpm10@psu.edu](mailto:jpm10@psu.edu). Advertisements can be placed in this newsletter as well as the preprints at very reasonable rates. Either forum is a cost effective way to reach the international community of fuel scientists. Advanced Fuel Research, Inc. and their spin-off company, On-Line Technologies, Inc., report a good response from advertisements in the preprints and expect similar results from the newsletter. Please consider this as one of your options if you have goods or services that are of interest to the fuels research community.

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