
FUEL CHEMISTRY NEWS

Newsletter of the ACS Division of Fuel Chemistry

Volume 89, No. 1

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

Spring 2010

Message from the 2009 Chair: Charles Taylor

Dear Members and Colleagues



As I complete my term as Chair of the Division of Fuel Chemistry, I would like to take this opportunity to thank everyone who has made this year a memorable one for me. I extend my thanks to the

Executive Board for all their hard work through out the year. These people work hard to insure that Fuel is one of the premier Divisions within the ACS and receive very little recognition for their work. Without them, the Division would not function. I want to mention the outstanding work done by Andy Herring, the 2009 Program Chair, for making 2009 one of the most prolific years for papers presented at the National Meetings by the Division. Fuel had 196 papers at the Salt Lake City Spring Meeting, with less than 10 withdrawn and 300 at the Washington D.C. Fall Meeting. I also wish to thank Caroline Burgess for all her help during this past year and wish her all the best as the Division's 2010 Chair.

The 2008 Fall Glen Award was presented at the joint Fuel/Petroleum Diner in Washington, D.C. The winning paper was "Structure-Property Relationships of Proton Exchange Membranes", authored by

Abhishek Roy, Hae- Seung Lee, Xiang Yu, Mou Paul, Judy S. Riffle, and James E. McGrath. The paper was selected from all the papers which were presented during a Fuel symposium at the 2008 Fall ACS National Meeting in Philadelphia, PA.

I also want to again extend my congratulations to Randy E. Winans, who along with the other 162 Class of 2009 ACS Fellows, was honored at a special ceremony during the ACS National Meeting in Washington, D.C., on Monday, August 17, 2009. This is a great honor for Randy and he is definitely deserving of this award. Randall Winans is a long time member of the Division of Fuel Chemistry and has served the Division in almost every Executive Board Office, and has served on numerous ACS committees. The ACS Fellows Program was created by the Board of Directors in December 2008 "to recognize members of the American Chemical Society for outstanding achievements in and contributions to Science, the Profession, and the Society." Ultimately, the body of Fellows is intended to reach approximately 1-2% of ACS membership.

Membership as of the 2009 Fall National Meeting was 1323, down slightly from the previous meeting, but still very a respectable number. The Division has significant international membership, focused predominantly in Japan, Canada, and United Kingdom.

I also want to extend my thanks to our Trustees who continue to do an excellent job at maintaining the Fuel Trust in these times of economic troubles. As with most investments, we were not immune to fluctuations in the market. Fuel is still solvent and thanks to our Trustees investment strategies, and the Executive Board, we plan to stay solvent.

In an effort to grow the Division, especially among younger chemists and engineers, I submitted a proposal to the ACS Innovative Projects Fund Proposals for Divisional Enhancement. The proposal was geared toward promoting a program to sponsor graduate students for participation working with the Fuel Executive Board. I am pleased that the Committee on Divisional Activities (DAC) accepted this proposal and as a result, two graduate students will be supported to work with the Fuel Executive Board during 2010. I hope that this program is successful and that we can expand it in order to allow more participation by younger chemists and engineers in the Division planning process.

Thank you,

A handwritten signature in black ink that reads "Charles E. Taylor". The signature is written in a cursive style with a long, sweeping underline.

Charles E. Taylor
2009 Chair, Division of Fuel Chemistry

<p>If you would like to have an announcement added to the Fuel Newsletter, please contact Michelle Kidder, kidderm@ornl.gov</p>

Message from the 2010 Chair: Caroline Burgess Clifford

Dear Fellow Members:



Welcome to 2010! I am looking forward to serving as your chair this year! I appreciate all the help from the other members of the executive council, and I am looking forward to an exciting year in the Fuel Chemistry Division. Last

year's program chair, Andy Herring (Colorado School of Mines), did a wonderful job as program chair for 2009 – Fuel had 196 papers at the Salt Lake City Meeting, and 300 papers at the Washington DC meeting. Andy also acted as preprint editor for part of the year, and has been very helpful to the upcoming program chair for 2010, Chang-jun Liu.

Several awards were presented at the joint Petroleum/Fuel Dinner at Washington DC at the National Aquarium. The 2008 Fall Glenn Award was presented; the winning paper was “Structure-property relationships of proton exchange membranes,” authored by Abhishek Roy, Hae- Seung Lee, Xiang Yu, Mou Paul, Judy S. Riffle, and James E. McGrath. The paper was presented Tuesday, August 19, 2008 in the symposium “Fuel Cell Chemistry and Operation.” The Fuel Chemistry Division Service Award was presented to Dr. Harold Schobert for all of his contributions to the Division. Dr. Akira Tomita was presented with the 2009 Henry H. Storch Award.

Membership remains high in the Fuel Chemistry Division; as of Fall 2009, we had



Presentation of 2008 Fall Glenn Award to Abhishek Roy and Mou Paul.



Presentation of Service Award to Harold Schobert.



Presentation of 2009 Henry H. Storch Award to Akira Tomita.

1312 members. We remain highly international, with 49 countries being

represented. Approximately 24% of our members are international or US members living abroad, with significant contributions from Japan, Canada, United Kingdom, South Korea, China, Australia, and Spain. We have 327 members in common with the Petroleum Division, 162 with IEC Division, and 106 with Environmental Division. One of the issues brought up at the last executive council is only 12% of our membership is female, so we will be working on ways to increase our female membership this year. Our past chair, Charles Taylor, received \$7,000 for an Innovation Grant titled "Sponsorship for graduate students for participation on Executive Board." Two students have applied and been accepted to participate this year: Meredith Bembenic and Yesica Alvarez, both Penn State graduate students. We are in the process of discussing ideas for the students to implement in 2010, which may include ways to increase the number of student members and members from underrepresented groups.

The Fuel Chemistry Division is still strong, both in membership and the treasury. A survey last year indicated that about 1/2 the members wanted to keep preprints and the other 1/2 did not want to publish preprints. We are investigating ways to reduce spending on preprints, such as having them only available on-line rather than sending out CD-ROMs. To learn more, I encourage Fuel Division members to attend the business meeting and the joint Fuel/Petroleum dinner.

New Executive Council members include: Andy Herring (Chair-elect), Yongsheng Chen (Treasurer), Semih Eser (Councilor), Angela Lueking (Alternate Councilor), and Hong Cui (Preprint Director). We are pleased that these people are willing to serve the division. If anyone is interested in running for office, nominating someone for office, or serving on the committee, please contact the Past Chair,

Charles Taylor at
Charles.Taylor@NETL.DOE.GOV.



Executive Council for Fuel Chemistry Division, Fall 2009.



Washington Monument in Washington DC.

I look forward to seeing many of you soon!

A handwritten signature in cursive script that reads "Caroline E. Burgess Clifford". The ink is dark and the signature is fluid.

Caroline E. Burgess Clifford, Chair, 2010,
Fuel Chemistry Division, ACS

Program Chairs Report 2009 – Andy Herring

2009 was yet another extremely successful year for the division in terms of programming. Before going any further let me first thank all the symposium organizers and session chairs without whom none of this would be possible. All division members should consider volunteering for this important task to ensure the future health of the division and I refer you to the list of future program chairs in this newsletter.

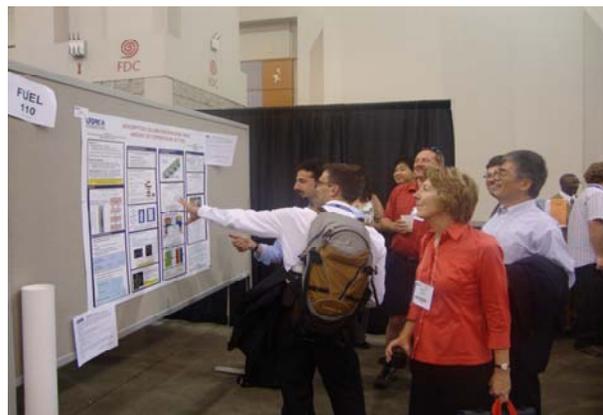
The Salt Lake City spring ACS meeting was one of the smallest ACS meetings of the decade, yet the Fuel division put on a very strong program with 200 papers arranged in several outstanding sessions. The theme of our programming at this meeting was in fossil fuels. ACS is encouraging greater participation by poster presenters and so FUEL put on the first division poster session jointly with the PETR division. The poster session was held during the afternoon parallel to the oral sessions in the same hotel and proved very successful.

The Washington DC meeting in the fall was much larger, and again the Fuel division programming was extremely strong with over 300 papers, but, this time with a more renewable and energy efficiency theme. We again had a joint FUEL/PETR poster session, this time much larger. The poster session was held in the evening during the general posters session, unfortunately we lost a lot of the ambiance of the Salt lake Poster session in the ACS poster barn and the divisions were organized alphabetically so that FUEL was not in the same location as PETR. I leave it to future program chairs to decide how best to organize the division posters.

One of the most involved jobs in the division is that of preprint editor and I had the great privilege of working with Bahram Fathollahi

who ad served the division in this demanding roll for some time. As Bahram was unable to continue in the fall I took over as temporary editor ably assisted by Sarah Nelson, a Mines undergraduate who did a stellar job. We are very fortunate that Hong Cui is now able to continue in this most important position.

In other news Joe Calo who for many years has been guiding the division program as program secretary has also been unable to continue. We thank Joe for all his hard work particularly his involvement with MPPG the ACS group that decides the theme of each meeting. Joe was one of the first to be involved in national meeting thematic programming. He was also able to keep accurate and complete records of the divisions contributions to national meetings. In the immediate future I will try humbly to fill his shoes.



Fall 2009 Poster session, Washington, DC.

Upcoming ACS Meeting Multidisciplinary Programming themes

- ACS 240th, Fall 2010, Boston, MA: Chemistry to combat and prevent disease
- ACS 241st, Spring 2011, Anaheim, CA: Chemistry of Natural Resources: Feeding a Hungry World
- ACS 242nd, Fall 2011, Denver, CO: Chemistry in Air, Space, and Water
- ACS 243rd, Spring 2012, San Diego, CA: Chemistry of Life
- ACS 244th, Fall 2012, Philadelphia, PA: Chemistry of Health

Awards:

*Call for nominations for the 2010 Henry. H. Storch Award, to be presented at the ACS 240th 2010 Boston, MA meeting. The Henry H. Storch Award in Fuel Chemistry is sponsored by the Division of Fuel Chemistry, ACS and by Elsevier Ltd. The Award is given annually to an individual who has made outstanding contributions to research in the field of fuel science. Special consideration is given to innovation and novelty in the use of fuels, characterization of fuels, and advances in fuel chemistry that benefit the public welfare or the environment. The award consists of \$5,000, a suitably engraved plaque, and an expense allowance of up to \$1,500 for travel to the meeting at which the award will be presented. Please see details <http://www.anl.gov/PCS/acsfuel/storchaward.html> Nominations are due March 8th, 2010 to the Fuel Chemistry Division Storch Award Chair, Prof. Eric Suuberg Division of Engineering, Brown University, Box D182, Hope Street, Providence, RI 02912. Eric_Suuberg(at)brown.edu

*Presented Fall 2009; Henry H. Storch award presented to Akira Tomita

*Presented Fall 2009; 2009 Class of Fellows of the ACS, Randy Winans.

*Presented Fall 2009; 2008 Glenn Award to Abhishek Roy, Hae- Seung Lee, Xiang Yu, Mou Paul, Judy S. Riffle, and James E. McGrath

*Presented Fall 2009; The Fuel Chemistry Division Service Award to Dr. Harold Schobert

Other News and Links of Interest:

Become a chemistry ambassador in your community!! ACS has a website devoted to help promote chemists to reach out to local communities to demonstrate, educate and inspire youth about the importance of chemistry. Check out the website: www.acs.org/chemistryambassadors

If you would like to have an announcement added to the Fuel Newsletter, please contact Michelle Kidder, kidderm@ornl.gov
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2010 Fuel Division Program of American Chemical Society (ACS)

239th ACS National Meeting & Exposition, March 21-25, 2010
San Francisco, CA

Program Chair: **Dr. Chang-jun Liu**, School of Chemical Engineering and Technology, P.O. Box 796666, Tianjin University, Tianjin 300072, China. Tel: +86 (22) 27406490, Fax: +86 (22) 27890078, Email: ughg_cjl@yahoo.com; Assistant Program Chair: **Dr. Velu Subramani**, BP Products North America Inc., Refining Technology (New Technology – Advanced Refining), 150 West Warrenville Road, Bldg: 701, Office # 1131, Naperville, IL 60563, USA. Tel: 630-420-5583; Fax: 630-420-4507, E-mail: velu.subramani@bp.com

Green Chemistry on Fuels of the Future - Dr. Ben W.-L. Jang, Department of Chemistry, Texas A&M U.-Commerce, PO Box 3011, Commerce, TX 75429, USA. Tel: (903) 886 5381/(903) 886 5383, Fax: (903) 468 6020, Email: Ben_Jang@tamu-commerce.edu; **Dr. Roger Gläser**, Institute of Chemical Technology, University of Leipzig, Linnéstr. 3, 04103 Leipzig, Germany. Tel: +49 (341) 9736 301 (300 secr.), Fax: +49 (341) 9736 349, Email: roger.glaeser@uni-leipzig.de; **Dr. Mingdong Dong**, Rowland Institute at Harvard, Harvard University, 100 Edwin H. Land Blvd., Cambridge, MA 02142, USA. Tel: (617) 497 4714, Fax: (617) 497 4627, Email: dong7@fas.harvard.edu; **Dr. Chang-jun Liu**, P.O. Box 796666, Tianjin University, Tianjin 300072, China. Tel: +86 (22) 27406490, Fax: +86 (22) 27890078, Email: ughg_cjl@yahoo.com.

Separation and Catalysis Needs for Renewable Energy – (Co-sponsors: CATL) **Dr. Sheng Dai**, Nanomaterials Chemistry Group, Chemical Sciences Division, Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, Oak Ridge, TN 37831, USA. Tel: (865) 576 7307, Fax: (865) 576 5235, Email: dais@ornl.gov; **Dr. Jun Liu**, Pacific Northwest National Laboratory, 902 Battelle Boulevard, Box 9999, MSIN: K2-50, Richland, WA 99352, USA. Tel: (509) 375 4443, Fax: (509) 375 2167, Email: jun.liu@pnl.gov.

Theory and simulation in energy production and utilization - (Co-sponsors: PHYS) **Dr. Qingfeng Ge**, Department of Chemistry and Biochemistry, Southern Illinois University, Carbondale, IL 62901, USA. Tel: (618) 453 6406, Fax: (618) 453 6408, Email: qge@chem.siu.edu; **Dr. Jun Li**, Department of Chemistry, Tsinghua University, Beijing 100084, China. Tel: +86 (10) 62795381, Email: junli@tsinghua.edu.cn; **Dr. Jianguo Wang**, College of Chemical Engineering and Materials Science, Zhejiang University of Technology, Hangzhou 310032 China. Tel: 86 (571) 88871037, Email: jgw@zjut.edu.cn.

Correlations in Membrane Science for Sustainable Systems - (Co-sponsors: PETRO) **Dr. Susan M. Stagg-Williams**, Chemical and Petroleum Engineering, The University of Kansas, 1530 W. 15th Street, 4132 Learned Hall, Lawrence, KS 66045, USA. Tel: (785) 864 2919, Fax: (785) 864 4967, Email: smwilliams@ku.edu; **Dr. S. Ted Oyama**, Environmental Catalysis and Nanomaterials Laboratory, Department of Chemical Engineering, Virginia Tech, Blacksburg, VA 24061, USA. Tel: (540) 231-5309, Fax (540) 231-5022, Email: oyama@vt.edu

Fuel Chemistry and Electrochemistry for Fuel Cells -(Co-sponsors: CATL) **Dr. Elton J. Cairns**, University of California, Chemical Engineering Department, 201 Gilman Hall, Berkeley, CA 94720, USA. Tel: (510) 486 5028, Fax: (510) 486 7303, Email: ejcairns@lbl.gov; **Dr. Sheng Sui**, Institute of Fuel Cell, Shanghai Jiao Tong University, Shanghai 200240, China. Tel: +86 (21) 34206249, Email: ssui@sjtu.edu.cn; **Dr. Robert Kostecki**, Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory, 1 Cyclotron Rd., MS 70R0108B, Berkeley, CA 94720-8168, USA. Tel. (510) 486 6002, Fax. (510) 486 7303, Email: r_kostecki@lbl.gov.

CO₂ Capture, Conversion and Utilization - (Co-sponsors: CATL) **Dr. Bao-Lian Su**, Department of Chemistry, University of Namur, Rue de Bruxelles, 61-B-5000 Namur, Belgium. Tel: +32 (0) 81724531, Fax: +32 (0) 81725414, Email: bao-lian.su@fundp.ac.be; **Dr. Victor S.-Y. Lin**, Chemical and Biological Sciences Program, Department of Energy, Ames Laboratory; Department of Chemistry, 0755 Gilman Hall, Iowa State University, Ames, IA 50011, USA. Tel: (515) 294 3135, Fax: (515) 294 0105, Email: vsylin@iastate.edu.

Hydrogen Storage - (Co-sponsors: CATL) **Dr. Thomas Gennett**, Materials and Computational Science Center, National Renewable Energy Laboratory, 1617 Cole Blvd. MS, Golden, CO 80401, USA. Tel: (303) 384 6628, FAX: (303) 384 6432, Email: Thomas_Gennett@nrel.gov; **Dr. Lennie Klebanoff**, DOE Metal Hydride Center of Excellence (MHCoe), Sandia National Laboratories, Livermore, CA 94550 USA. Tel: (925) 294 3471, Email: lekleba@sandia.gov; **Dr. Yun Hang Hu**, Department of Materials Science & Engineering, Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931-1295, USA . Tel: (906) 487 2261, Fax: (906) 487 2934, Email: yunhangh@mtu.edu

Advances in Coal Conversion Chemistry - **Dr. Semih Eser**, Department of Energy and Mineral Engineering, Pennsylvania State University, 154 Hosler Building, University Park, PA 16802, USA. Tel: (814) 863 1392, Fax: (814) 865 3248, Email: seser@psu.edu; **Dr. Alan L Chaffee**, School of Chemistry, Monash University, VIC 3800, Australia. Tel: +61 3 9905 4626, Fax: +61 3 9905 4597, Email: Alan.Chaffee@sci.monash.edu.au; **Dr. Kouichi Miura**, Department of Chemical Engineering, Kyoto University, Kyoto-Daigaku Katsura, Nishikyo-ku, Kyoto 615-8510, Japan. Tel. +81-75383-2663, Fax. +81-75-383-2653, Email: miura@cheme.kyoto-u.ac.jp; **Dr. Jieshan (Jason) Qiu**, School of Chemical Engineering, Dalian University of Technology, 158 Zhongshan Road, P.O.Box 49, Dalian 116012, China. Tel: +86-411-88993994, 88993970(O), Fax: +86-411-88993991, Email: jqiu@dlut.edu.cn

Solar Cells and Solar Fuels -(Co-sponsors: CATL) **Dr. Donghai Wang**, Department of Mechanical and Nuclear Engineering, The Pennsylvania State University, 328 Reber Building, University Park, PA 16802, USA. Tel: 814-863-1287; Fax: 814-863-4848; E-Mail: dwang@psu.edu; **Dr. Yunfeng Lu**, 5531G, Boelter Hall, Dept. of Chemical & Biomolecular Engineering, University of California, Los Angeles, Los Angeles, CA 90095, USA. Tel: (310) 794-7238, Fax: (310) 206-4107, Email: luucla@ucla.edu; **Dr. Licheng Sun**, Department of Chemistry, School of Chemical Science and Engineering, Royal Institute of Technology (KTH), Teknikringen 30, 100 44 Stockholm, Sweden. Tel. +46-8-7908127, Fax. +46-8-7912333, Email: lichengs@kth.se; **Dr. Hongfei Jia**, Materials Research Department, Toyota Research Institute of

North America, Toyota Motor Engineering & Manufacturing North America, Inc., 1555 Woodridge, Ann Arbor, MI 48105, USA. Tel: (734) 995-0183, Fax: (734) 995-2549, Email: hongfei.jia@tema.toyota.com

Advances in Fuel Science and Technology (Poster)- Chang-jun Liu, School of Chemical Engineering and Technology, P.O. Box 796666, Tianjin University, Tianjin 300072, China. Tel: +86 (22) 27406490, Fax: +86 (22) 27890078, Email: ughg_cjl@yahoo.com; **Dr. Sang-Eon Park**, Lab Nanogreen Catalysis, Inha Univ, Incheon 402751, South Korea. Email: separk@inha.ac.kr

**Fuel Chemistry Division Co-sponsored Symposia:
Photocatalysis for Fuel Synthesis (CATL)**

Gabor A. Somorjai Award for Creative Research in Catalysis: Symposium in Honor of Robert J. Madix (CATL)

George A. Olah Award in Hydrocarbon or Petroleum Chemistry: Symposium in Honor of Peter C. Stair (CATL)

Advances in Fischer Tropsch Catalysis and Processing (PETRO)

240th ACS National Meeting & Exposition, August 22-26, 2010
Boston, MA

Online submission of abstract (200 word) and preprint paper (2 Pages) via ACS Website
<http://abstracts.acs.org>. Instruction for preprint papers available online at
<http://www.anl.gov/PCS/acsfuel/preprintinfo.html>. **Deadline March 22, 2010.**

Program Chair: **Dr. Chang-jun Liu**, School of Chemical Engineering and Technology, P.O. Box 796666, Tianjin University, Tianjin 300072, China. Tel: +86 (22) 27406490, Fax: +86 (22) 27890078, Email: ughg_cjl@yahoo.com; Assistant Program Chair: **Dr. Velu Subramani**, BP Products North America Inc., Refining Technology (New Technology – Advanced Refining), 150 West Warrenville Road, Bldg: 701, Office # 1131, Naperville, IL 60563, USA. Tel: 630-420-5583; Fax: 630-420-4507, E-mail: velu.subramani@bp.com

Storch Award Symposium – to be organized by the winner

Non-thermal plasma assisted fuel conversion - Dr. Tomohiro Nozaki, Department of Mechanical and Control Engineering, Tokyo Institute of Technology, 2-12-1 O-okayama, Muguro, Tokyo 1528552, Japan. Tel: +81-3-5734-2179, Fax: +81-3-5734-2893, Email: tnozaki@mech.titech.ac.jp; **Dr. Gutsol, Alexander**, Mechanical Engineering & Mechanics, Drexel Plasma Institute, Drexel University, 3141 Chestnut Street, Randell Hall 115, Philadelphia, PA 19104, USA. Tel: (215) 895 1485, Fax: (215) 895 1478, Email: alexander.gutsol@gmail.com

Nanotech for Sustainable Energy and Fuels (Co-sponsor: CATL)- **Dr. Uwe Burghaus**, Department of Chemistry and Molecular Biology, North Dakota State University, Fargo, North Dakota 58105-5516, USA. Tel: (701) 231 9742, Fax: (701) 231 8831, Email: Uwe.Burghaus@ndsu.edu; **Dr. Flemming Besenbacher**, Interdisciplinary Nanoscience Center (iNANO), Ny Munkegade, Building 1521, University of Aarhus, DK-8000 Aarhus C, Denmark. Tel: (+45)8942 3604, Fax: (+45) 8942 3690, Email: fbe@inano.dk; **Dr. Zhong Lin (Z.L.) Wang**, School of Materials Science and Engineering, Georgia Institute of Technology, Atlanta GA 30332-0245, USA. Tel (404) 894-8008, Fax (404) 894-8008 or (404) 894-9140, Email: zhong.wang@mse.gatech.edu; **Dr. Chang-jun Liu**, School of Chemical Engineering and Technology, P.O. Box 796666, Tianjin University, Tianjin 300072, China. Tel: +86 (22) 27406490, Fax: +86 (22) 27890078, Email: ughg_cjl@yahoo.com.

Hydrogen Production and Application (Co-sponsor: CATL)- **Dr. Jun Yang**, Ford Motor Co, POB 2053, Dearborn, MI 48121, USA. Tel: 313-3379803; Email: jyang27@ford.com; **Dr. Xianqin Wang**, Department of Chemical Engineering, New Jersey Institute of Technology, 323 MLK Blvd., University Heights, Newark, NJ 07102-1982. Tel: 973-596-5707; Fax: 973-596-8436. Email: xianqin@njit.edu

Biochemistry and Biotechnology for Fuels – **Dr. Shelley D. Minteer**, College of Arts and Sciences Endowed Professor of Chemistry, Saint Louis University, 3501 Laclede Ave., St.

Louis, MO 63103, USA. Tel: 314-977-3624, Fax: 314-977-2521, Email: minteers@slu.edu; **Dr. Michael J. Cooney**, Hawaii Natural Energy Institute, School of Ocean And Earth Science And Technology, University of Hawaii at Manoa, Tel: (808) 956-7337, Fax: (808) 956-2336, Email: mcooney@hawaii.edu

Ionic Liquids in Sustainable Energy and Fuels (Co-sponsor: IEC Division) - **Dr. Edward J. Maginn**, Department of Chemical and Biomolecular Engineering, University of Notre Dame, Notre Dame, IN 46556 USA. Tel: (574) 631 5687, Fax: (574) 631 8366, Email: ed@nd.edu; **Dr. Wesley Henderson**, Department of Chemical & Biomolecular Engineering, North Carolina State University, Centennial Campus, Engineering Building I, Office 2088F, 911 Partners Way, Campus Box 7905, Raleigh, NC 27695-7905, USA. Tel: (919) 513 2917, Fax: (919) 515 3465, Email: whender@ncsu.edu

Fuel Cell Chemistry and Operation (Co-sponsor: CATL)- **Dr. Andy Herring**, Department of Chemical Engineering, Colorado School of Mines, Golden, CO 80401-1887, USA. Tel: (303) 384-2082, Fax: (303) 273-3730, Email: aherring@mines.edu; **Dr. Tom Zawodzinski**, Department of Chemical Engineering, Case Western Reserve University, A. W. Smith Building, Room 116, 10900 Euclid Ave, Cleveland, OH 44106-7217, USA. Tel: (216) 368-5547, Fax: 216-368-3016, Email: taz5@po.cwru.edu; **Dr. Steven Hamrock**, 3M Fuel Cell Components Program, St Paul, MN 55144, USA. Email: sjhamrock@mmm.com

Advances in Fuel Science and Technology (Poster)– **Prof. Chang-jun Liu**, School of Chemical Engineering and Technology, P.O. Box 796666, Tianjin University, Tianjin 300072, China. Tel: +86 (22) 27406490, Fax: +86 (22) 27890078, Email: ughg_cjl@yahoo.com; **Prof. Xinbin Ma**, School of Chemical Engineering and Technology, Tianjin University, Tianjin 300072, China. Tel: +86 (22) 27406498, Fax: +86 (22) 87401818, Email: xbma@tju.edu.cn

Coal-, gas-, biomass- and waste-to-liquids conversion - **Dr. Arno de Klerk**, Department of Chemical and Materials Engineering, University of Alberta, Edmonton, AB T6G 2V4, CANADA. Tel.: (780) 248-1903 ; E-mail: deklerk@ualberta.ca; **Dr. David King**, Catalysis Science and Applications, Hydrocarbon Processing Group, Pacific Northwest National Laboratory, P.O. Box 999, Richland, WA 99352, USA. Tel: (509) 375-3908, Fax: (509) 375-2186, Email: David.King@pnl.gov

New Energy Technologies – **Prof. Chang-jun Liu**, School of Chemical Engineering and Technology, P.O. Box 796666, Tianjin University, Tianjin 300072, China. Tel: +86 (22) 27406490, Fax: +86 (22) 27890078, Email: ughg_cjl@yahoo.com; **Dr. Jianguo Wang**, Chinese Academy of Science, Institute of Coal Chemistry, State Key Laboratory of Coal Conversion, Taiyuan 030001, Shanxi, China. Tel: 86 351 4046092; Email: iccjgw@sxicc.ac.cn; **Prof. Jianfeng Chen**, Research Center of the Ministry of Education for High Gravity Engineering & Technology, Beijing University of Chemical Technology, Beijing 100029, China. Tel: 86 10 64434784; Email: chenjf@mail.buct.edu.cn

2011 Fuel Division Program of the American Chemical Society (ACS)

241st ACS National Meeting & Exposition. March 27-31, 2011 Anaheim, California

ACS Theme: Chemistry of Natural Resources: Feeding a Hungry World

Spring 2011 Fuel Division Program

Program Chair:

Velu Subramani, Ph.D.
BP Products North America, Inc.
150 West Warrenville Road
Naperville, IL 60563.
E-mail: velu.subramani@bp.com
Phone: 630-420-5583 (Desk)
630-234-7367 (cell)

Symposia Topics:

1 Fuels, Chemicals, Materials and Energy from Coal, Biomass, Natural gas, Coal-Bed Methane and other Natural Resources

Organizer:

Dr. Yong Wang, Institute for Interfacial Catalysis, Pacific Northwest National Laboratory, Richland, WA 99354, USA.
E-mail: yongwang@pnl.gov

2 Gas Hydrates, Clathrates and Alternative Energy Sources: Production and Processing Chemistry

Organizers:

Prof. Amadeu K. Sum, Center for Hydrate Research, Department of Chemical Engineering, Colorado School of Mines, Golden, CO 80401-1887; E-mail: asum@mines.edu; Phone: 303.273-3873 / Fax: 303.273-3730

Prof. Carolyn A. Koh, Center for Hydrate Research, Department of Chemical Engineering, Colorado School of Mines, Golden, CO 80401-1887; E-mail: ckoh@mines.edu

Prof. E. Dendy Sloan, Center for Hydrate Research, Department of Chemical Engineering, Colorado School of Mines, Golden, CO 80401-1887; E-mail: esloan@mines.edu

3 Heavy Oils, Resids and Bitumen: Upgrading Chemistry and Process

Organizers:

Dr. John F. Schabron, Western Research Institute, University of Wyoming Research Corporation, 365 North 9th Street, Laramie, WY 82072. 307-721-2445, E-mail: JFSchabr@uwyo.edu

Dr. Tushar V. Choudhary, Hydrotreating R&D, RM&T Research ,
ConocoPhillips, 105-CL, Bartlesville Technology Center.
Bartlesville, OK-74004. Phone: 918-661-7738.
E-mail: tushar.v.choudhary@conocophillips.com

4 Solar Energy Conversion and Utilization for Fuels and Energy Production

Organizers:

Prof. Ranjit T. Koodali, Department of Chemistry University of South Dakota
Vermillion, SD 57069 USA, E-mail: Ranjit.Koodali@usd.edu. Tel.: 1-605-677-
6189; Fax: 1-605-677-6397.

Dr. Christian Sattler, Solar Materials Conversion, German Aerospace Center,
Solar Research, Porz-Wahnheide, Linder Höhe, 51147 Köln, Germany;
Telephone: +49 2203 601-2868;
E-mail: christian.sattler@dlr.de

Prof. Masakazu Anpo, Department of Applied Chemistry, Graduate School of
Engineering, Osaka Prefecture University, 1-1 Gakuen-cho, Naka-ku, Sakai-city,
Osaka 599-8531, Japan. Tel: -81-72-254-9139, Fax: -81-72-254-9941, E-mail:
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5 CO₂ Capture, Sequestration, Conversion and Utilization

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6 Ultraclean Fuels Production and Utilization for Sustainable Transportation

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Prof. J. Iwan D. Alexander, Cady Staly Professor of Mechanical and Aerospace Engineering Director, The Great Lakes Energy Institute, Case Western Reserve University, Phone:(216)-368-6045
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8 **Spectroscopic Techniques to Elucidate Reaction Mechanisms and Structure-Activity Relationships in Fuel and Energy Science**

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11 **Chemistry of Nuclear Fuels in Energy Production**

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12 **General papers in Chemistry of Fuels and Energy**

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Fall 2011 Fuel Division Program

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Contaminant, Air Toxics and Emission Control Technologies for Clean Fuels and Energy Production and Utilization

Water and Renewable Fuels for Clean and Sustainable Energy Production

Coal and Alternative Hydrocarbon Sources for Clean Fuels, Chemicals and Energy Production

Greenhouse Gas Emissions: Control, Conversion and Utilization for Fuels and Energy Production

Hydrogen and Syngas: Production and Conversion Technologies for Fuels, Chemicals and Energy Production - Dr. Velu Subramani, BP Products North America Inc., Refining Technology, 150 West Warrenville Road, Naperville, IL 60563, USA, *Voice: 630-420-5583, E-mail: velu.subramani@bp.com*

Computational Methods and Modeling in Fuel Science

Advances in Hydrotreating and Hydrocracking technologies

Hydrogen Storage: Advances and Future Challenges

Fuel Cells: Current Status and Future Challenge - Dr. Elise B. Fox, Savannah River National Lab, Materials Science & Technology, Aiken, SC 29808, E-mail: elise.fox@srnl.doe.gov. Phone: (803)507-8560 or 725-3240.

Chemistry of Coke and Carbon Deposition in Fuel Production and Processing

General Papers in Chemistry of Fuels and Energy - Dr. Velu Subramani, BP Products North America Inc., Refining Technology, 150 West Warrenville Road, Naperville, IL 60563, USA, *Voice: 630-420-5583, E-mail: velu.subramani@bp.com*

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