



ACS Division of Energy & Fuels

2016 Summer Newsletter

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Letter from the Chair



Hello fellow ENFL members!

The Spring ACS meeting was a spectacular venue in San Diego! The ENFL program committee packed the symposia with over 427 accepted abstracts. These high quality talks were presented in 48 sessions ranging from the award symposia honoring the ENFL Distinguished Researcher in honor of Dr. Stu Soled, and the George A. Olah Symposium in honor of Dr. Mieczyslaw M. Boduszynki to symposia that deal with the core science related to ENFL's scientific interests in materials and reactions in areas such as batteries, fuel cells, renewables, solar cells, computational modeling of reactions, CO₂ conversion, oil production and upgrading and methane technologies.

The symposia at the ACS 252nd in Philadelphia, will be located in the convention center and also be packed with exciting seminars, including the Storch award symposia, and Energy and Fuels Joint Award Symposia for Excellence in Publishing honoring the best publication authored by Dr. Charles Mullen, from the USDA, titled "Production of Deoxygenated Biomass Fast Pyrolysis Oils via Product Gas Recycling". Please look at the ACS website for all the programming dates and times at www.acs.org.

Congratulations to the recent winners of ENFL awards. Dr. Phillip F. Britt of Oak Ridge National lab is the recipient for the 2016 Storch award. An award symposium to honor Dr. Britt will be held at the 2016 ENFL 252nd ACS national meeting in Philadelphia. Dr. Liangbing Hu from the University of Maryland was named the ENFL 2016 Emerging Researcher. Dr. Lisa Colosi from the University of Virginia was

named as the recipient of the Glenn award for the 2015 ENFL Fall meeting in Boston for best paper and presentation. Dr. Jonathan Mathews was awarded the Distinguished Service Award for his service to the ENFL division. Also, congratulations to Dr. Elise Fox, from Savannah River National Laboratory, for being recognized as a Rising Star by the Women's Chemist Committee.

We have an excellent team of volunteers in ENFL who serve in the capacity as officers and symposium organizers, and I would like to thank all of you who volunteer and have dedicated your service to our division. Without each volunteer, the division would not be able to provide quality symposia, recognize the science of our members, or contribute to local societies to enhance scientific outreach and education. It is through everyone's great contributions that allows for the successful operation of the ENFL Division.

ENFL will have a Business meeting social on Monday, August 22nd, 12pm-1pm, in the convention center, room 107A for its members. Please consider attending the Tuesday night (August 23rd, 2016) ENFL dinner at R2L in Philadelphia. Tickets can be purchased online during ACS registration.

Please take advantage of the Newsletter and the ENFL website (web address above) to post jobs, free to our members! Also, keep an eye on the website and your email for important announcements such as due dates for award nominations, ACS registration or abstracts, etc.

Thank you to Chevron, Exxon Mobil, Phillips 66 and Ted Oyama Consulting for sponsoring the ENFL dinner in San Diego!

After many years of requiring and providing preprints in addition to ENFL abstracts, it was decided that preprints will no longer be required, starting in 2017.

Finally, I wish you all the best and safe travels to Philly if you can make it!

Michelle K. Kidder



2016 Chair, ACS Energy and Fuels Division

Awards



Dr. Liangbing Hu was awarded the 2016 ENFL Emerging researcher. Dr. Hu is an associate professor at University of Maryland and has published 147 papers and with over 10,000 citations. His research interests include nanomaterials, roll-to-roll nanomanufacturing, energy storage focusing on solid-state batteries and Na ion batteries, and printed electronics. received his B.S. in physics from the University of Science and Technology of China (USTC) in 2002, where he worked with Prof Yuheng Zhang on colossal magnetoresistance (CMR) materials for three years. He did his Ph.D. in at UCLA (with George Gruner), focusing on carbon nanotube based nanoelectronics (2002-2007). In 2006, he joined Unidym Inc as a co-founding scientist.

2016 Henry H. Storch Award in Fuel Science

Phillip F. Britt

Oak Ridge National Laboratory



The Storch Award is awarded to Dr. Phil F. Britt for his elucidation of new fundamental insights into the complex mix of free-radical, ionic and concerted reaction paths of oxygen functional groups in organic energy resources, which is crucial to devising improved methods for converting fossil and biomass resources into fuels and chemicals. Since joining ORNL in 1988, Phil's research has focused on elucidating fundamental kinetic and mechanistic insights into the pyrolysis of organic molecules that serve as models for important structural features found in energy resources, such as biomass and low rank coals. Of particular note is his body of work that has focused on understanding oxygen functional group chemistry in these energy resources. This work was especially important because the role of heteroatoms in pyrolysis reactions has been less understood than traditional hydrocarbon chemistry and because heteroatoms were also thought to play an important role in the processing of the low rank coal, biomass and other oxygen-rich energy sources. He has also focused on understanding the role of oxygen functional group chemistry in retrogressive (cross-linking) reactions that are critical to conversion of low rank coals into liquid fuels and commodity chemicals. Further, he elucidated the effects of restricted mass transport on free-radical reactions. A hallmark of Phil's research has been his

approach that combines meticulous experimental studies with thermochemical kinetics and computational modeling to provide valuable predictive insights into reaction rates (via estimates of Arrhenius parameters) and mechanisms. His research has resulted in over 145 peer-reviewed articles and preprints and over 200 scientific presentations, many of which were invited. He has twice won the Richard A. Glenn Award for best paper, and he has been asked to present his work at five previous Storch Award Symposia. He has also made exceptional contributions to the fuel science community, organizing over 10 symposia at national meetings, and has served as the Treasurer, Chair and Director-at-Large of the ACS Division of Fuel Chemistry, as well as Alternate Councilor for the Energy & Fuels Division. He also served as Chair of the Gordon Conference on Hydrocarbon Resources. He has received the Distinguished Service Award from the ACS Division of Fuel Chemistry, and he is a Fellow of the American Chemical Society.

Division Dinner in San Diego

The ENFL dinner was held at the beautiful Prado Inn, in Balboa Park. Between the beautiful weather, catching up with colleagues, honoring the career and scientific achievements of ENFL members, and the delicious food, it was an absolute wonderful night.



Dr. Andrew Holmes, recipient of the 2015 Glenn Award.



Dr. Stu Soled, recipient of the Distinguished Researcher award.

Division Stats:

ENFL Membership is 2,613, which makes ENFL a class II Division (2000-3499 members). 1,844 are regular members (71%), 360 are student members (14%) 45 are retired, with 122 emeritus members / The average age is 53, 16% are female membership. We remain highly international with 24% international membership. The bulk of these members are from Canada (92), Japan (64), China (92), UK (45), and Australia (36). We have members in at least 46 nations. Our members overlap with the divisions of IEC (349), CATL (340), ENVR (183), CELL (163), and INOR (155).

Some of our ENFL dedicated Committee members



Election results for 2016

Chair-elect: Mike Reynolds (Shell)
Treasurer Kristi Fjare (Phillips 66)
Councilor: Semih Eser (Penn State Univ)
Councilor: Kathleen Carrago Gregar (Argonne National Laboratory)
Director-at-Large: Alan Chaffee (Monash University)

Tidbits:

Don't hesitate to contact an ENFL officer if you would like to become a bigger part of the governance of ENFL. It is a rewarding experience, with the biggest benefit of connecting with the scientific community at large within academics, government and industry.

ENFL is offering free job postings on its website for members, please contact Randall Winans at rwinans@anl.gov or in this newsletter kidderm@ornl.gov