

AIChE NSEF Newsletter - Fall 2016

American Institute of Chemical Engineers

October 2016

Message from the Chair

As our thoughts turn to the annual meeting in November, I would like to highlight NSEF programming and encourage you to attend. We have a vibrant series of plenary sessions lined up, including talks from our award winners Dr. Yushan Yan and Dr. Yue Wun. Please check out our award plenary session, as well as plenaries in the bionanotechnology area and a new plenary in energy (see below). I hope you will join all of us Wednesday evening at the Hilton Union Square for the NSEF reception. This is an excellent opportunity to meet our officers and get involved in our programming. On that note, we are currently seeking nominations, including self-nominations, for our officer positions. If you are interested in being part of the organization, please email me directly (winter.63@osu.edu). See you all in San Francisco.

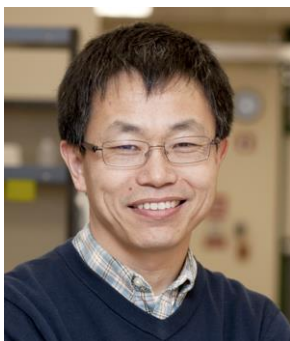
- Dr. Jessica Winter, NSEF Chair

News and Announcements**NSEF Programming for 2016 AIChE Annual Meeting:**

NSEF is pleased to announce many exciting scientific sessions at the 2016 Annual Meeting in San Francisco, California from November 13 - 18, 2016. Highlights of the programming activities are included below.

2016 NSEF Award Winners:

At the 2016 Annual Meeting in San Francisco, NSEF will present **Dr. Yushan Yan** with the 2016 NSEF Forum Award for his work related toward renewable electrochemical energy and automotive fuel cells and **Dr. Yue Wu** with the 2016 NSEF Young Investigator Award for significant advances in nanostructure composite materials. The award winners will be highlighted in the NSEF Plenary Session at the AIChE Annual Meeting. Dr. Yan's talk will involve, "Toward a distributed renewable electrochemical energy and mobility system (DREEMS): electrocatalysis for automotive fuel cells" and Dr. Wu's talk will be on, "Nanostructured composite materials for thermoelectric applications." Their short bios are included below:



Yushan Yan is the Distinguished Engineering Professor and the Associate Dean for Research and Entrepreneurship of the College of Engineering at the University of Delaware. He studied Chemical Physics (BS) at the University of Science and Technology of China (1983-1988), Heterogeneous Catalysis at the Dalian Institute of Chemical Physics of the Chinese Academy of Sciences (1988-1992), and Chemical Engineering (MS/PhD) at the California Institute of Technology (1992-1996). He worked for AlliedSignal as Senior Staff Engineer and Project Leader (1996-1998) before joining the faculty at the University of California Riverside (Assistant Professor, 1998; Associate Professor, 2002; Professor, 2005; University Scholar Professor, 2006-2010; Department Chair 2008-2011; and University of California Presidential Chair 2010-2011). He was elected a Fellow of the American Association for the Advancement of Science

(2008) and recognized with the Donald Breck Award by the International Zeolite Association (2010). He was one of 37 awardees of the US Department of Energy's ARPA-E OPEN 2009 (1st open call for proposals) and one of 66 awardees of the ARPA-E OPEN 2012 (2nd open call for proposals). He has been an inventor on a number of issued or pending patents, some of which were licensed to form startup companies (e.g., NanoH₂O and OH-Energy). His research has led to 200+ publications that are widely

cited (11,000+ citations, h-index = 58 and average citation/paper = 55), and extensively covered by the media including New Scientist, Business Week, C&EN News, Materials Today, MRS360, Chemical Engineering Progress, China Press, Chinese Daily News, CNBC, CNN.com, KABC, Radio Australia, and VOA.



Prof. Yue Wu joined Iowa State University as the Herbert L. Stiles Associate Professor of Chemical and Biological Engineering in summer 2014. He obtained his B.S. degree in Chemistry at the University of Science and Technology of China, Hefei, Anhui, P.R.China in 2001, with Best Undergraduate Thesis Award. He obtained his Ph.D. degree in Chemistry at Harvard University (07/2001-06/2006) in Prof. Charles Lieber's group. He then received Miller Fellowship and performed postdoctoral research in Prof. Paul Alivisatos' group at the University of California at Berkeley (08/2006-07/2009). In August 2009, Wu joined Purdue University to start his independent academic career. After receiving an early promotion to tenured associate professor in the School of Chemical Engineering at Purdue University on April 4, 2014, he accepted the position of the Herbert L. Stiles Associate Professor of Chemical and Biological Engineering from Iowa State University with a joint appointment in

Department of Energy Ames National Laboratory.

Premier of NSEF-Sponsored Energy Plenary Session:

At the 2016 Annual Meeting, a new NSEF-sponsored plenary session, "Emerging Energy Applications of Nanoscale Science and Engineering" will debut. Please join is from 12:30 - 3:00pm in Hilton Golden Gate 7 for this exciting session!

NSEF Reception:

NSEF invites all current members to attend the NSEF Reception at the AIChE Annual Meeting on Wednesday, November 16th from 7 - 9pm at the Hilton Union Square. In addition to some wonderful food and beverages, announcements will be made for the NSEF Award winners, graduate student awards, and poster session awards. We hope to see you there!

2016 AIChE Annual Meeting Graduate Student Award Sessions:

NSEF is sponsoring two award sessions at the 2016 AIChE Annual Meeting in the areas of Bionanotechnology and Carbon Nanomaterials. These sessions honor graduate students whose research achievements are in these areas and who demonstrate a high level of excellence in their work. At the end of each session, a panel of judges will determine 1st - 3rd place awards. The two sessions will be held at the following times and locations:

- Carbon Nanomaterials: Monday, November 14th, 3:15 - 5:45pm, Hilton Golden Gate 7
- Bionanotechnology: Tuesday, November 15th, 8:30 - 11:00am, Hilton Golden Gate 6

2016 AIChE Annual Meeting NSEF Poster Session:

Also, the NSEF poster session will be Tuesday, November 15th from 6:00 - 8:00 pm in Hilton Grand Ballroom B. Numerous high quality posters addressing fundamental science and engineering issues associated with nanoscale science, engineering and technology will be presented. The poster session will be judged, and student awards will be given to the best three posters.

Nominations for NSEF Leadership Positions

The NSEF will conduct its biennial elections this year. Nominations, including self-nominations, will be accepted for positions of vice chair, secretary/treasurer, and 2 members at large. Note that the vice chair becomes the chair after 2 years, and then serves as chair for 2 years, and past chair for 2 additional years. Thus, this is a 6 year commitment. Please forward nominations to current chair, Jessica Winter at winter.63@osu.edu. Nominations should include biographical information and a short statement.

Summary of Programming Activities

Sunday, November 13th:

3:30pm - 6:00pm:

#20: Biomaterials for Nucleic Acid Delivery

#21: Bionanotechnology for Gene and Drug Delivery I

#41: Nanorods and Nanowire

Monday, November 14th:

8:30am - 11:00am:

#75: Plenary Session: Chemical Engineering Principles for Nanotechnology

12:30pm - 3:00pm:

#168: Nanotechnology for Biotechnology and Pharmaceuticals

#176: Plenary Session: Emerging Energy Applications of Nanoscale Science and Engineering

3:15pm - 5:45pm:

#203: Bionanotechnology for Gene and Drug Delivery HH

#204: Carbon Nanomaterials Graduate Student Award Session

6:00 - 8:00pm:

#260: Poster Session, Nanoscale Science and Engineering

Tuesday, November 15th:

8:30 - 11:00am:

#277 Biomaterials Scaffolds for Tissue Engineering I

#279: Bionanotechnology Graduate Student Award Session

#297: In Honor of Nicholas Peppas I

#316: Synthesis of Graphene and Carbon Nanotubes

12:30 - 3:00pm:

#331: Area Plenary: Bionanotechnology I

#357: Graphene and Carbon Nanotubes

#362: In Honor of Nicholas Peppas II

3:15 - 5:45pm:

#392: Area Plenary: Bionanotechnology II

#412: Graphene and Carbon Nanotubes

#413: In Honor of Nicolas Peppas III

Wednesday, November 16th:

8:30 - 11:00am:

#484: Magnetic Nanoparticles in Biotechnology and Medicine

#490: Nanofabrication and Nanoscale Processing

12:30 - 3:00pm:

#542: Nanomaterials Manufacturing

#544: Nanoparticles and Health

#556: Self-Assembled Biomaterials I

3:15 - 5:45pm:

#571: Carbon-Based Nanostructured Membranes

#584: Environmental Applications of Nanomaterials

#606: Self and Directed Assembly at the Nanoscale

#607: Self-Assembled Biomaterials II

Thursday, November 17th:

8:30 - 11:00am:

#639: Environmental Applications of Nanotechnology and Nanomaterials I

#650: Nanoscale Science and Engineering in Biomolecular Catalysis

#652: Nanotechnology and Nanobiotechnology for Sensors and Imaging I

12:30 - 3:00pm:

#686: Environmental Applications of Nanotechnology and Nanomaterials II

#699: Nanostructured Biomimetic and Biohybrid Materials and Devices

#700: Nanotechnology and Nanobiotechnology for Sensors and Imaging II

Member Awards & Highlights

If you have a recent high impact publication, honor, or award that you would like to have highlighted in the NSEF Newsletter please submit these to the Newsletter Editor at smeenach@uri.edu.

Upcoming Events

2016 AIChE/SBE Translational Medicine and Bioengineering Conferences

November 12 - 13, 2016 in San Francisco, California

<http://www.aiche.org/sbe/conferences/translational-medicine-and-bioengineering-conference/2016>

nano tech 2017

February 15 - 17, 2017 In Tokyo, Japan

<http://www.nanotechexpo.jp/>

7th International Conference on Bioengineering and Nanotechnology

March 19 - 22, 2017 in Chicago, Illinois

<http://www.aiche.org/sbe/conferences/international-conference-on-bioengineering-and-nanotechnology-icbn/2017>

TechConnect Nanotech 2017 Conference & Expo

May 14 - 17, 2016 in Washington, DC

<http://www.techconnectworld.com/Nanotech2017/>

Membership Column

Not a member of AIChE or NSEF? In order to guarantee that you are included in our current email list so that you will have updated access to NSEF materials and award eligibility make sure you are a current NSEF and AIChE member. NSEF membership is an additional \$10/year to the AIChE membership. You can follow the steps of one of the following options below to join:

1. Visit AIChE's membership website to sign up online: <http://www.aiche.org/membership>
2. Download the following file from the AIChE website: Membership Application PDF and send your application and payment directly to AIChE.

NSEF Leadership

Chair

Dr. Jessica Winter, Associate Professor
Chemical & Biomolecular Eng.; Biomedical Eng.
The Ohio State University
335 Koffolt Laboratories, 140 W Nineteenth Ave
Columbus, OH 43210
[614.247.7668](tel:614.247.7668), winter.63@osu.edu

Vice Chair

Dr. Geoffrey D. Bothun, Associate Professor
Department of Chemical Engineering
University of Rhode Island
16 Greenhouse Road, Kingston, RI 02881
401.874.9518, gbothun@uri.edu

Treasurer/Secretary

Dr. Michael Harris, Reilly Professor of Chemical Engineering
School of Chemical Engineering
Purdue University
480 Stadium Mall Drive, West Lafayette, IN 47906
765.494.0963, mtharris@purdue.edu

Past Chair

Dr. Zach Hilt, William Bryan Associate Professor
Chemical and Materials Engineering
University of Kentucky
350 ASTeCC, Lexington, KY 40506-0046
[859.257.9844](tel:859.257.9844), zach.hilt@uky.edu

Director of Programming

Dr. Reginald Rogers, Assistant Professor
Department of Chemical Engineering
Rochester Institute of Technology

160 Lomb Memorial Drive
Rochester, NY 14623
585.475.4157, rerche@rit.edu

Department of Chemical Engineering
Texas Tech University
6th and Canton, Mail Stop 3121
Lubbock, TX 79409-3121
[806.834.2776](tel:806.834.2776), micah.green@ttu.edu

Director of Membership/Newsletter Editor

Dr. Samantha Meenach, Assistant Professor
Department of Chemical Engineering; Department of Biomedical & Pharmaceutical Sciences
University of Rhode Island
16 Greenhouse Road, Kingston, RI 02881
[401.874.4303](tel:401.874.4303), smeenach@uri.edu

Director of Technology

Dr. Jung-Sheng Wu, Advanced Research Specialist
CRPL/AM&RP/Particle & Composite Processing
3M Center, 208-1-1 , St Paul, MN 55144-1000
[651.733.2973](tel:651.733.2973), jswu@mmm.com

Director ("at-large" Executive Committee member)

Marc Kelemen, QA/RA/Quality Engineering Director
ROE Dental Labs
nanomarc@wowway.com

Director ("at-large" Executive Committee member)

Dr. Hebabuddin A. Quazi, P.E.
Technical Director
MARTECH International, Inc.
Box 22551, Houston, TX 77227
832.269.2043, quazi@martech-international.com

CTOC Representative

Dr. Rosemarie Wesson, NSF CBET Program Director
703.292.7070, rwesson@nsf.gov

AICHe Staff Liaison

Darlene Schuster
darls@aiche.org