

From: AIChE Dallas Section <announcements@aichedallas.ccsend.com>
Sent: Wednesday, June 4, 2025 10:28 AM
To: fja@aguivel.com
Subject: Join us for our local section meeting on June 24, 2025



**American Institute of Chemical Engineers
Dallas Section
June 2025**

Join us for our upcoming meeting on June 24, 2025

Join us at 6:30 pm at our usual location:

Two Guys from Italy, 11637 Webb Chapel Road, Dallas,
Texas

Our speaker: Julia W. P. Hsu, Professor, University
of Texas at Dallas

Title: Solar Cells -- Beyond Silicon

Abstract

The growing demand for energy is a direct result of rising living standards worldwide, compelling a shift to include renewable energy sources such as solar and wind power. Solar cells, which convert sunlight into electricity through photovoltaic (PV) action, are pivotal in this transition. Silicon-based solar cells dominate current rooftop generators and large-scale solar farms. This talk explores the fundamental operation of traditional inorganic solar cells and their use in terrestrial and space applications. However, silicon's properties limit their suitability for emerging applications like solar windows, building-integrated photovoltaics (BIPV), and agrivoltaics. I will discuss emerging technologies that use solution-processable materials such as organics and halide perovskites. These materials offer the potential for cost-effective manufacturing methods but face critical challenges related to performance, long-term stability, and

environmental safety, which must be addressed to enable widespread industrial adoption.

Speaker bio

Julia W. P. Hsu is a Professor of Materials Science and Engineering at the Erik Jonsson School of Engineering and Computer Science of the University of Texas at Dallas (UTD) and holds the Texas Instruments Distinguished Chair in Nanoelectronics. She received her B. S. E. degree in Chemical Engineering from Princeton University, her Ph.D. degree in Physics from Stanford



University, and did her postdoctoral training at Bell Labs. Prior to UTD, she was a Member of Technical Staff at Sandia National Laboratories and Bell Labs, and an Assistant and tenured Associate Professor of Physics at the University of Virginia.

Prof. Hsu's research encompasses a wide range of materials, from organic materials to metal oxides to semiconductors. Her recent work focuses on the physics and applications of organic and perovskite solar cells, novel processing of flexible electronics, new resist materials for extreme UV lithography, and machine learning approaches to accelerate the processes of materials synthesis and processing. Prof. Hsu is a Fellow of the American Physical Society (APS), the American Association for the Advancement of Science, the Materials Research Society (MRS), and the Institute of Physics (IoP). She has served in key leadership roles in professional societies, including Board of Directors and Treasurer of MRS, DOE Basic Energy Sciences Advisory Committee, National Academies Review Panels, and external advisory committees for research centers. She has published over 260 journal papers, has been granted 5 patents, and has given over 200 invited talks.

[\(https://personal.utdallas.edu/~jxh101000/\)](https://personal.utdallas.edu/~jxh101000/)

Break during the summer

Our local section does not meet during the summer months of July and August. After the June meeting, please plan to join us again starting on September 23, 2025.

Last call to serve in the Executive Committee next fiscal year?

Serving in your local section Executive Committee is a great opportunity to get more involved. The commitment for most positions is only one year.

If you have an interest, or want to know more about what is involved, please reply to this email announcement.

Do you need an ethics PDH to renew your PE license?

The Texas Board of Professional Engineers and Land Surveyors (TBPELS) offers ethics webinars that meet the requirements for PE license renewal. The next available webinars are scheduled on the following dates.

- June 5, 2025

Registration will open approximately one month prior to each webinar. To check availability of webinars and to register, visit pels.texas.gov/webinars.html

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American Institute of Chemical Engineers | 120 Wall Street, FL 23 | New York, NY 10005 US

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