

CATALYSIS CLUB OF PHILADELPHIA
*Promoting Catalytic
Science and Technologies*

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Catalysis Club of Philadelphia

Thursday, November 15th, 2018

Crowne Plaza Wilmington North

630 Naamans Road, Claymont, DE 19703

Student Poster Competition

Come See the Exceptional Work from Local Universities!

Speaker: Prof. Eric A. Stach

***How can the modern scanning transmission electron
microscope aid catalysis science?***

University of Pennsylvania

Meeting Schedule:

Poster Judging 5:00 PM

Dinner 6:30 PM

Meeting 7:30 PM

Meeting Fees:

Members: \$40.00

Non-Members: \$45.00

Stud. & Retired Members: \$25.00

Menu

*A "Taste of Italy" buffet meal,
including a Traditional Caesar Salad,
Garlic Parmesan Bread, Italian
Sausage with Onions and Peppers,
Eggplant Parmesan, Baked Ziti with a
Vodka Blush Sauce, and Tiramisu.*

Meal reservations – Please
register online by ***Friday,***
November 9th at

<http://catalysisclubphilly.org/>

or notify your company
representative or our
Treasurer Lifeng Wang
(Lifeng.Wang@pqcorp.com)
or Chair Eric Sacia
(Eric.R.Sacia@dupont.com)

Membership - Dues for the
2018-19 season will be
\$25.00 (\$5.00 for the local
chapter and \$20.00 for the
national club). Dues for
students, post-docs and
retirees will be \$10.00 (\$5.00
for local club and \$5.00 for
national club).

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Prof. Eric A. Stach

How can the modern scanning transmission electron microscope aid catalysis science?

*Laboratory for Research on the Structure of Matter and Singh Center for Nanotechnology
University of Pennsylvania*

Abstract: The past decade or so have seen a number of technological advances in the field of transmission electron microscopy that have dramatically enhanced both the utility and utilization of the instrument in the field of heterogeneous catalysis. These include aberration correction, enhanced detectors and improvements in simulation and analysis software. In this presentation, I will present several specific examples from both my own research and from others in the field to provide a general overview of the state of the art. In specific, I will describe the limits of spatial, spectroscopic and temporal energy resolution, and demonstrate how one can perform both real time and operando measurements do characterize the interrelationships between catalyst structure and catalyst function. Through the presentation, I will emphasize how these techniques are being implemented at the Singh Center for Nanotechnology at the University of Pennsylvania and how they are thus accessible to members of the Catalyst Club of Philadelphia.

Speaker Details: Eric Stach is a Professor in the Department of Materials Science and Engineering at the University of Pennsylvania. He received his B.S.E from Duke University, M.S.M.S.E. from the University of Washington, his Ph.D. in Materials Science and Engineering from the University of Virginia and a Masters of Business Administration at Stony Brook University. He has held positions as Staff Scientist and Principal Investigator at the National Center for Electron Microscopy at the Lawrence Berkeley National Laboratory, as Associate, then Full Professor at Purdue University, and as Group Leader at the Center for Functional Nanomaterials at the Brookhaven National Laboratory. He is a Co-founder and the Chief Technology Officer of Hummingbird Scientific. He is also Secretary of the Board of Directors for the Materials Research Society.