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Wednesday, January 17th, 2018
Clarion Hotel, 60 Cottontail Ln, Somerset, NJ 08873

Andrew D. Schmitz

SCIENTIFIC DESIGN COMPANY, INC.
A SABIC – CLARIANT PARTNERSHIP COMPANY



Ethylene Oxide Catalysis and Process Technology

Ethylene partial oxidation to ethylene oxide (EO) is a high-volume chemical process, and global EO capacity exceeds 30 million MT/year. More than 70% of the EO produced is hydredted to make monoethylene glycol (MEG) and higher glycols (diethylene glycol, tri-..., and poly-). Scientific Design Co., Inc. licenses its technology and supplies catalyst for this process to over 100 plants in 30 different countries. Following a brief overview of EO production technology and the market for EO and glycols, this presentation will focus on EO catalysis. The catalyst generally comprises 10-20 Wt% Ag and ppm-levels of various promoters supported porous, low surface-area α -Al₂O₃, and is operated at 220-280 °C.

Speaker Bio:

Andrew Schmitz graduated from The University of Iowa with a PhD in Inorganic Chemistry in 1993, specializing in heterogeneous catalysis. He continued his study of catalysis as a *Research Associate* at The Pennsylvania State University and then as a *Research Fellow* at the National Institute of Advanced Industrial Science and Technology in Sapporo, Japan. His experiences were split between catalysis of small-molecule reactions, including Fischer-Tropsch synthesis, CH₄/CO₂ reforming, and methanol dissociation, and catalysis of petrochemical reactions such as selective hydrogenation and alkylation. He started his career at Scientific Design in 1999 and is presently a *Principal Research Chemist* working on EO catalyst development. He has been engaged in many activities at Scientific Design beyond catalyst development, including catalyst manufacture, engineering process development, and catalyst startup and operation training at customer plants.

Dinner is a buffet, and includes <u>a choice of beef, chicken or fish</u>		Members	\$40
		Non-members	\$50
Social Hour (Cash Bar)	6:00 PM	Students	\$25 (Student Members = \$10)
Dinner	7:00 PM	Retired/Post-Doc/Unemp.	\$40 (Members = \$30)
Presentation	7:45 PM	Annual Membership Dues	\$35 (Students = \$15)

Deadline for dinner reservations is 4:00 p.m. Friday, January 12th, 2018

To make your reservation, fill out the [online form](#). With the exception of extreme circumstances, anyone not canceling reservations by the above deadline will be billed for dinner regardless of attendance.

2017-2018 Officers: Ke Xiong (Chair), George Tsilomelekis (Chair-Elect), Fuat Celik (Past Chair), Israel Wachs (Catalysis Society Rep), Quddus Nizami (Secretary), John Brody (Treasurer), Benjamin Moskowitz (Webmaster), Lucas Dorazio, Marco Castaldi, Zhong He (Directors), Zhiyi Wu (Director-Membership), Zhexi Lin (Student Representative)