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*Promoting Catalytic
Science and Technologies*

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Catalysis Club of Philadelphia

Thursday October 13th, 2011

DoubleTree Hotel

4727 Concord Pike Wilmington, DE 19803

Timely 21st Century Challenges: New Small Molecules Chemistries

Prof. Roy A. Periana

The Scripps Research Institute

Social Hour: 5:30 PM

Dinner: 6:30 PM

Meeting: 7:30 PM

Members: \$35.00

Walk Ins & Non-members: \$40.00

Student & Retired Members: \$20.00

Menu

Chicken Dijonaise with Sun Dried Tomatoes & Tarragon topped with a Creamy Dijon Sauce

Center Cut Filet Mignon Char-grilled, atop Potato Latkas with Baby Carrots & a Green Peppercorn Sauce

Vegetarian: Eggplant Rollatini rolled and stuffed with sautéed vegetables then topped with a Melted Mozzarella & Balsamic Glaze

Vegan: Mediterranean Purse Roasted Vegetables, Couscous, served with Ratatouille

Meal reservations - Please notify your company representative or Kevin Bakhmutsky

(kbakh@seas.upenn.edu, phone: 215.898.0056, fax: 215.573.2093) by **Thursday October 6th**.

Company Representatives – We would like to encourage you to make meal/meeting reservations to your company representative.

Membership - Dues for the 2011-12 season will be \$25.00 (\$5.00 for the local chapter and \$20.00 for the national club). Dues for students and post-docs will be \$10.00 (\$5.00 for local club and \$5.00 for national club). Please send your payment to Steve Harris, LyondellBasell Industries 3801 West Chester Pike, Newtown Square, PA 19073.

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Timely 21st Century Challenges: New Small Molecules Chemistries

Prof. Roy A. Periana

Department of Chemistry, The Scripps Research Institute, Jupiter, FL 33548.

Abstract:

The chemistries of the small molecules (CH_4 , N_2 , CO_2 , O_2 , H_2O) are the basis for most of our energy and materials today. Developing new chemistry for the conversion of these molecules could provide a basis for the next generation processes that are more sustainable and economical while minimizing dependence on oil. We will discuss the challenges and our approaches to developing stable molecular catalyst for the conversion of small molecules at lower temperatures and higher selectivities.

Biographical Sketch:



Prof. Roy A. Periana completed his Ph.D. work under the supervision of Prof. Robert G. Bergman at the University of California Berkeley (1985). As an industrial chemist, he has worked at Dow Chemical Company (1979-1981), Monsanto Company (1985-1988), as a group leader at Catalytica Inc., (1988) and was a co-founder and vice president of research at Catalytica Advanced Technologies (1994). He then joined the Chemistry Department at the University of Southern California (USC), Los Angeles, California (2000). During his time at USC, he was a member of the Loker Hydrocarbon Institute and Director for the USC-Caltech-Chevron consortium on catalysis. Since 2001, Prof. Periana has been a visiting associate in the Chemistry Department at the California Institute of Technology in Pasadena, California. He was a co-founder and served on the board of directors for Qateomix (2005). In 2007, he was appointed Professor and Director of the Scripps Energy Laboratories at The Scripps Research Institute in Jupiter, Florida. During his career he authored many articles and chapters that have been published in notable journals such as *Science* and covered in *Chemical and Engineering News*, *The Wall Street Journal*, and *The New York Times*. He has been an invited speaker at numerous national and international conferences. His current interest is on the design of catalysts for the low temperature, selective, conversion of small molecules with emphasis on CH_4 , CO_2 and N_2 .