

THE 1ST ANNUAL ECHI SYMPOSIUM

HYDROGEN INITIATIVE SYMPOSIUM  
**THE ENERGY CENTER**

April 5th—6th, 2006

**Purdue University**

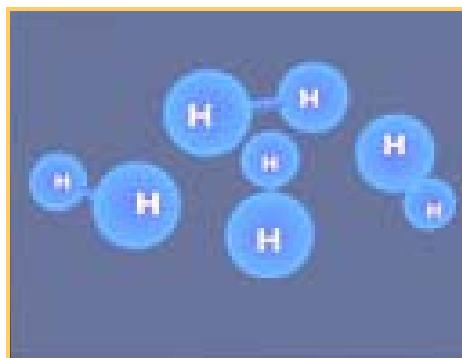
**West Lafayette, Indiana**

[WWW.PURDUE.EDU/DP/ECHI](http://WWW.PURDUE.EDU/DP/ECHI)

**PURDUE**  
UNIVERSITY.

**Discovery Park**

*It will happen here.*



**Hydrogen Research at Purdue University / MORGAN CENTER ROOM 121**

- 12:00-1:00 pm      Registration (in Atrium)
- 1:00 p.m.**            **Welcome**—Shripad Revankar, Symposium Co-Chair
- 1:05-1:20**            **Discovery Park Concept and Activities:**  
Pankaj Sharma, Assistant Director, Discovery Park
- Session Chair: Bill Leighty, The Leighty Foundation**
- 1:20-1:35            [Arvind Varma, Department Head](#) / *R. Games Slayter Distinguished Prof. of Chemical Engineering*
- 1:35-1:50            [Jerry Woodall, Distinguished Professor](#) / *ECE & ECHI International Advisory Board Chair*
- 1:50-2:05            [B. C. Raju, Research Associate, Chemistry](#)
- 2:05-2:20            [George Bodner, Author E. Kelly Distinguished Professor of Chemistry & Education, Chemistry](#)
- 2:20-2:35            [Duane Wegener, Professor, Psychological Sciences](#)
- 2:35-3:00**            **Coffee Break**
- Session Chair: M. Daniel Raftery, Purdue University**
- 3:00-3:15            [Bob Kramer, Director](#) / *Energy Efficiency & Reliability Center, Purdue Calumet*
- 3:15-3:30            [Heather Cooper, Assistant Professor, Mechanical Engineering Technology](#)
- 3:30-3:45            [Kyoung-Shin Choi, Assistant Professor, Chemistry](#)
- 3:45-4:00            [Seungmin Oh, Research Associate, Nuclear Engineering](#)
- 4:00-4:15            [Elson Ison, Research Associate, Chemistry](#)
- 4:15-4:30            [Yuan Zheng, Visiting Professor, Mechanical Engineering](#)
- 4:30**                 **Wrap Up**

**Symposium Banquet / Purdue Memorial Union North Ball Room**

- 6:00 p.m.—6:30 p.m.      Appetizers & Cash Bar
- 6:30-6:35            Welcome by Dr. Jay Gore, *Director, The Energy Center*
- 6:35-6:50            Jan Mills, Mayor of West Lafayette, Indiana
- 6:50—7:30**            **DINNER**
- 7:30-7:35            Herbert C. Brown and the Legacy of Hydrogen Research at Purdue  
[Timothy S. Zwieter, Professor & Head, Department of Chemistry](#)
- 7:35                 Herbert C. Brown Award Ceremony  
Dr. Jerry Woodall, *Distinguished Professor Electrical & Computer Engineering & International Advisory Board Chair, ECHI*
- 7:55**                 **Closing Remarks**

**8:15 p.m.—9:30 p.m.**  
CONCERT

***“Energy in Music & It’s Affects on the Human Body”***  
The Carnatica Brothers  
K. N. Shashikiran & P. Ganesh




ECHI Symposium at Purdue University / STEWART CENTER		ROOM
<b>7:00 a.m.– 8:00 a.m. Continental Breakfast &amp; Registration</b>		<b>202</b>
<b>8:00-8:05</b> 8:05-8:10	<b>Welcome—</b> P.V. Ramachandran, Symposium Chairman Jay P. Gore, Director, Energy Center	<b>218</b>
<b>8:10–8:20</b>	<b>President Martin C. Jischke, Purdue University</b>	
	<b>Session Chair: David McMillin, Purdue University</b>	
8:20–9:00	<a href="#">Plenary Lecture I, Jay Keller</a> , Sandia National Laboratory	
9:00-9:30	<a href="#">Keynote Speaker I, John Petrovic</a> , Department of Energy Update on DOE Hydrogen Storage Activities	
9:30-10:00	Keynote Speaker II, Scott Jorgensen, General Motors An Automotive Perspective on Hydrogen Storage	
<b>10:00–11:00</b>	<b>COFFEE BREAK &amp; POSTER SESSION</b>	<b>202</b>
<b>11:00–12:00</b>	<b>Parallel Sessions</b>	
<b>Room 218</b>	<b>Session Chair: Tom Autrey, PNNL</b>	
11:00	<a href="#">Robert Santoro</a> , Pennsylvania State University, Current Status of Hydrogen Energy Research & Development at Pennsylvania State University	
11:20	<a href="#">Brian Bischoff</a> , Oak Ridge National Laboratory The Hydrogen Separation & Storage Activities	
11:40	<a href="#">Theodore Motyka</a> , Savannah River National Laboratory, Solid-state Hydrogen Storage Materials & System Development	
<b>Room 310</b>	<b>Session Chair: Seungmin Oh, Purdue University</b>	
11:00	<a href="#">Ken Shultz</a> , General Atomics, Hydrogen Production, Nuclear Energy	
11:20	<a href="#">Jim O'Brien</a> , Idaho National Laboratory, Hydrogen from Nuclear Energy via High Temperature Electrolysis	
11:40	<a href="#">Mark Petri</a> , Argonne National Laboratory, Hydrogen Markets & Hydrogen Production	
<b>12:00–1:20</b>	<b>LUNCH / PURDUE MEMORIAL UNION—SOUTH BALL ROOM</b>	
	<b>Lunch Address, Indiana State Senator, David C. Ford</b>	
<b>1:00-3:00</b>	<b>Plenary / Keynote Speakers—STEWART CENTER</b>	
	<b>Session Chair: Peng Gao, Aldrich Chemical Co.</b>	
1:20–2:00	<a href="#">Plenary Lecture II, Nigel Sammes</a> , University of Connecticut High Temperature Ceramic Proton Conducting Membranes	<b>218</b>
2:00–2:30	<a href="#">Keynote III, David Schubert</a> , U.S. Borax Boron Fueling Innovation-a Retrospective	
2:30–3:00	<a href="#">Keynote IV, Tom Baker</a> , Los Alamos National Laboratory Amine-Boranes for Hydrogen: Controlling Selectivity in Catalyzed Dehydrogenation	
<b>3:00–3:15</b>	<b>COFFEE BREAK</b>	<b>202</b>

**ECHI Symposium at Purdue University / STEWART CENTER**

**3:15—4:55**

**Parallel Sessions**

**Room 218**

**Session Chair: David Schubert, U.S. Borax**

- 3:15 Lester Begg, *General Atomics*, Portable Fuel Cell System for Dismounted Soldier
- 3:35 [Tom Autrey](#), *Pacific Northwest National Laboratory*, Amine Boranes Chemical Hydrogen Storage
- 3:55 Craig Jensen, *University of Hawaii*, Detection & Characterization of Point Defects in Ti-Doped Sodium Aluminum Hydride & Their Relationship to Enhanced Solid-State Hydrogen Cycling Kinetics
- 4:15 Ying Wu, *Millennium Cell Inc.*, Sodium Borohydride Based Hydrogen Storage Technology for Portable Fuel Cell Applications
- 4:35 [Ali T-Raissi](#), *University of Florida*, Hydrogen & Fuel Cell Research at the Florida Solar Energy Center

**Room 310**

**Session Chair: Jim O'Brien, INL**

- 3:15 [Dave Austgen](#), *Shell Hydrogen*, Pathways to Clean & Green Hydrogen
- 3:35 Stephan Woods, *Honeywell Technology Solutions, Inc.*, Hydrogen & Storage Initiatives at the NASA JSC White Sands Test Facility
- 3:55 [Bill Leighty](#), *The Leighty Foundation*, Large Stranded Renewables: The International Renewable Hydrogen Transmission Demonstration Facility (IRHTDF)
- 4:15 [Richard E. Wagner](#), *PhycoBiologics, Inc.*, Hydrogen Production from Green Algae
- 4:35 [Randy Cole](#), *ForeverGreen Enterprises, Inc.*, Green Hydrogen Powered Cash Flow Improvements

**4:55**

**ADJOURN / Announcement of the 2007 ECHI Symposium**

*By your Host: P.V. Ramachandran, Department of Chemistry*

*Shripad Revankar, School of Nuclear Engineering*



FOR ADDITIONAL INFORMATION

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**The Energy Center**

Discovery Park, Purdue University

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