

Hydrogen Day 2004 Posters

General Topics

- 1) "Hydrogen Storage and Generation Research at The Applied Research Laboratory" - M. Klanchar and others
- 2) "Hydrogen Research at the Energy Institute" - Caroline Burgess Clifford, Angela Lueking, and Harold Schobert
- 3) "Penn State University hydrogen fueling station facility" - Joel Anstrom, Zoltan Rado, Heath Hofmann, Ben Zile, and Scott Pflumm
- 4) "Integration of a fuel cell and electric vehicle for hydrogen fleet demonstration" - B. Zile S. Pflumm J. Anstrom, Z. Rado, H Hofmann, and B. Logan
- 5) "The Fuel Cell Dynamics and Diagnostics Lab at Penn State" - M. M. Mench
- 6) "Fuel Cell and Hydrogen Technology Educational Lab" - V. Rodriguez-Santiago, M.V. Fedkin, and S.L. Lvov.
- 7) "Compilation of Fuel cell research projects carried out at the Center for electrochemical science and technology" - Z. Lu, H. Cho, A. Sun, J. Bao, K. Nahar, B. W. Roh.

Fuel Cell Analysis and Technologies

- 8) "Mapping the Reactivity of Oxide Surfaces by Computer Modeling" - Elam A. Leed, Jorge O. Sofo and Carlo G. Pantano
- 9) "Electricity generation in single chamber microbial fuel cells" - Hong Liu and Bruce Logan
- 10) "Optimizing Pt-air cathode for Microbial fuel cell" - Shaoan Cheng and Bruce Logan
- 11) "Inorganic/Organic Composite Membranes for Elevated-Temperature PEM Fuel Cells" - S. N. Lvov, E. Chalkova, M.V. Fedkin, and D. J. Wesolowski
- 12) "Novel Fuel Cell Air Cathodes Running on Dirty Air: Solving the CO₂/CO Poisoning Problem" - Varun Sambhy, Ashutosh Tewari, Dr. Ayusman Sen, Dr. Mirna Urquidi Macdonald
- 13) "Poly(ether sulfones) - proton conducting polymers for high temperature PEM fuel cells" - Zijie Lu, Hungoo Cho, Evangelos Manias, Digby Macdonald
- 14) "Hydrogen-Assisted IC Engine Combustion as a Route to Hydrogen Implementation" - Dan Haworth, Joel Anstrom and Andre' Boehman
- 15) "Simultaneous Measurement of Mass and Current Distributions in Polymer Electrolyte Fuel Cells" - X.G. Yang, N. Burke, C.Y. Wang
- 16) "Visualizing Liquid Water Transport in a Polymer Electrolyte Fuel" - Xiao-Guang Yang, Kazuya Tajiri, and Chao-Yang Wang
- 17) "Tailoring Catalyst Layer Structure and Membrane Electrode Assembly for Low Methanol and Water Crossover in Direct Methanol Fuel Cells" - Fuqiang Liu, Guoqiang Lu and Chao-Yang Wang
- 18) "Advanced materials for hydrogen and direct methanol fuel cell membranes" - R. Wood and H. Allcock

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Hydrogen Storage

- 19) "Enhanced Hydrogen Storage due to Induced Defects in Graphite NanoFibers" - Deepa L Narayanan, Angela D Lueking, Caroline B Clifford
- 20) "Synthesis of C/B Materials for Hydrogen Storage" - Dr. T. C. Mike Chung, Fugen Zhang, Michael Wells
- 21) "Enhanced hydrogen uptake of doped SWNTs: Conceptualization of Hydrogen spillover phenomenon" - Puja Jain
- 22) "Carbon materials from coal for hydrogen storage" - John Andresen, Colin Jennis-McGroarty
- 23) "Morphological Effects on Hydrogen Storage in Palladium Nanoparticulates" - J. A. Nelson (a), S. Kishore (b), J. H. Adair (a), and P. C. Eklund (b)
- 24) "Electricity generation from animal wastewater using a microbial fuel cell" - Booki Min, Sangeun Oh, Hong Liu, Shaoan Cheng, and Bruce Logan
- 25) "Effective enrichment procedures to acclimate a Microbial Fuel Cell for electricity generation" - Jungrae Kim and Bruce Logan
- 26) "Electricity generation using a two-chambered microbial fuel cell" - SangEun Oh and Bruce Logan
- 27) "RF- and m-Wave-Induced Rapid. Low Temperature Desorption of H₂ Stored in Media Containing Carbon Nanotubes" - David L. Allara and T. Imholt

Hydrogen Generation

- 28) "OptStrain: A Computational Framework for Redesign of Microbial Hydrogen Production Systems" - Costas D. Maranas and Priti Pharkya
- 29) "Synthesis and characterization of silica-carbon nanocomposite membranes for gas separation" - Anna Merritt, Ramakrishnan Rajagopalan, Anna Tsyetlin, Henry C. Foley
- 30) "Biohydrogen production from a trickling filter reactor" - Husen Zhang, Mary Ann Bruns, and Bruce E. Logan
- 31) "Enhancement of hydrogen evolution with decrease in green house gas emission through CO₂ control in hydrogen fermentation" - Wooshin Park, Bruce Logan and In. S. Kim.
- 32) "Hydrogen production by the photo-cleavage of water using TiO₂ nanotube arrays" - K. Shankar, G. M. Mor, O.K. Varghese, M. Paulose, C. A. Grimes
- 33) "Leaching study of a Highly Active Oxygen-Assisted Water-Gas-Shift Catalyst" - E. S. Bickford, S. Velu, C. Song
- 34) "Adsorptive Desulfurization of Transportation Fuels Over Nickel Based adsorbents Derived from Layered Double Hydroxides" - J. Clemons, S. Velu, X. Ma, C. Song
- 35) "Isolation of Dominant Hydrogen-Producers from Continuously Fed Bioreactors" - Yonghua Luo, Husen Zhang, Michael Salerno, Bruce Logan, and Mary Ann Bruns

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Miscellaneous

- 36) "Life prediction of nuclear waste storage containers" - Balaji Soundararajan, Morgan Smith, Brian Marx, and Adan Sun
- 37) "Optimization of Zirconium Oxide Coating Technology to Mitigate Intergranular Stress Corrosion Cracking in BWRs" - Leon G. Amelinckx, Kamrun Nahar and Digby D. Macdonald
- 38) "H₂ Assisted Combustion" - M. Fox, N. Reed

Exhibit Booths with Back-Panels

- 39) NSF GREATT Program - Led by Berk Gerdes
- 40) Toyota Motor Sales USA - Geoff Partain
- 41) H₂E Center at Penn State
- 42) Centre Area Transportation Authority (CATA)
- 43) "Pennsylvania Stationary Fuel Cell Initiative" - David Thompson and others

Exhibit Booths without Back-Panels

- 44) Brenda Geary-Bucek - Advanced Fuel Cell Technology Magazine (FCT)
- 45) "The Hybrid and Hydrogen Vehicle Research Center at the Pennsylvania Transportation Institute" - PTI
- 46) Altoona-Blair County Development Corporation
- 47) ERA Power Company - Bruce Godfriaux
- 48) Materials Research Institute at Penn State
- 49) Industrial Research Office at Penn State