

## Research Foundation to sponsor fuel cell workshop on AU campus

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The State University of New York Research Foundation, in conjunction with the New York State Center for Advanced Ceramic Technology at Alfred University, the Center for Environmental and Energy Research and the School of Engineering, will sponsor a workshop, "Materials Issues for Fuel Cells," from 1:30-6:30 p.m. Thursday, Oct. 14, in Nevins Theater, Powell Campus Center, on the AU campus. The workshop follows the annual John F. McMahon Memorial Lecture, to be delivered by AU alumnus Dr. Chong-il Park, now vice president of the Research and Product Technology Center for Kyocera America. The lecture is slated for 11:20 am Oct. 14 in Holmes Auditorium, Harder Hall on the AU campus. "The world energy crisis has brought fuel cell systems to the forefront of emerging power generation technologies," noted Dr. Vasantha Amarakoon, professor of ceramic engineering at AU and director of the Center for Advanced Ceramic Technology. "They are being considered for a variety of power generation applications because of their higher energy conversion efficiencies, extremely low on-site environmental pollution and very low noise." "When it comes to actually producing fuel cells, however, "materials issues dominate the challenges associated with their practical implementation, including high initial cost compared to conventional power generation systems, packaging, and durability and reliability," said Amarakoon, who noted there are "significant efforts" under way at in both industrial and university labs to improve fuel cell technology and make it marketable within this decade. Involved in the effort are several car manufacturers, as well as utility companies. Amarakoon said the objective of the workshop is to "provide a dialogue and networking opportunities among the scientists and engineers, to exchange information, experiences, and insights in fuel cell materials research needs; to provide a forum for discussion on advances, to identify barriers, to accelerate the technology development, and to further stimulate their activities in this emerging important field." At the end of the workshop, he hopes to have laid the groundwork for joint research collaborations between university and industry scientists and engineers through funding secured from state and federal agencies. Dr. Alastair N. Cormack, dean of the School of Engineering at Alfred University, will welcome participants to the workshop, which begins at 1:30 p.m. Dr. Harry Tuller of the Massachusetts Institute of Technology will deliver the keynote address, "Overview of Materials Issues Confronting Fuel Cell Development," at 1:40 p.m. Additional speakers include: Dr. Mitchell Anthamatten, University of Rochester, "Polyimide Block Copolymers for Fuel Cell Applications; Dr. Scott Misture, Alfred University, In-Situ X-Ray Analysis Applied to Science and Engineering Problems in Solid Oxide Fuel Cells; Dr. Chong-Jian Zhong, State University of New York at Binghamton, Development of Fuel Cell Catalysts; Dr. Doreen Edwards, Alfred University, Impedance Analysis of Microwave Sintered Zirconia Ceramics; Dr. Hazem Tawfik, Farmingdale State University of New York, Testing and Evaluation of Corrosion Resistant Coatings for PEM Fuel Cell Aluminum Bipolar Plates; and Dr. Xingwu Wang, Alfred University, Thin Film Fabrications for Fuel Cell Applications. Also, Dr. Hector D. Abrua, The Cornell Fuel Cell Institute, Cornell University, An Advanced Materials Approach to Fuel Cell Technologies; Dr. Bruce van Dover, The Cornell Fuel Cell Institute, Cornell University, High-Throughput Investigation of Intermetallic Fuel Cell Catalysts; Dr. Alastair Cormack, Alfred University, Materials Design Using Computer Simulation; Dr. Hong Yang, University of Rochester, Synthesis and Fabrication of Crystalline Phase and Composition-Specific Platinum Containing Nanoparticles for Low Temperature Hydrogen Fuel Cell; Dr. Vasantha Amarakoon, Alfred University, Ceria Based Composite Materials for High Temperature Fuel Cell Applications; and Dr. Richard Partch, Clarkson University, Chemical Processing of Particle Surfaces for Improved Material Properties. A dinner will follow. Those interested in attending may contact Marlene Wightman, director of Continuing Education and Conferences, at 607 871 2425 or e-mail her at [Wightman@alfred.edu](mailto:Wightman@alfred.edu).