Broad materials challenges explored at MCARE meeting

Cochairs George Wicks (left) and Jack Simon led the conference at its NASA-influenced Cocoa Beach locale.

Poster presenter Jonathan Lee from NASA's Marshall Space Flight Center explains his work to Edgar Lara-Curzio.

Materials engineers and researchers streamed in from around the world to Cocoa Beach, Fla., in late February to participate in sessions on topics that ranged from sun and wind power to advanced batteries to hydrogen generation and storage.

The Material Challenges in Alternative and Renewable Energy conference – organized as a follow up to an ACerS' 2008 meeting that focused on hydrogen-related topics – drew more interest than originally anticipated. "We had over 220 attendees," says MCARE cochair George Wicks. "I think 25 countries represented and the attendance was more than expected."

Wicks said the post-conference feedback has been very good, especially for the tutorial sessions that launched the conference. Wicks praised the assistance of ASM International and Society of Plastics Engineers for helping craft the program presented.

Wicks' cochair, Jack Simon, agreed, saying, "We had the entire spectrum of materials covered: metals, composites, glass, ceramics and plastics covered, and that turned into some really

Yet-Ming Chiang's tutorial session on battery technology

CTD's Mike Tupper (center) discusses wind turbines with DOE energy experts Ned Stetson (left) and Jose Zayas.

Conference breaks and receptions offered plenty of opportunities to exchange information and discuss possible collaborations. ▼

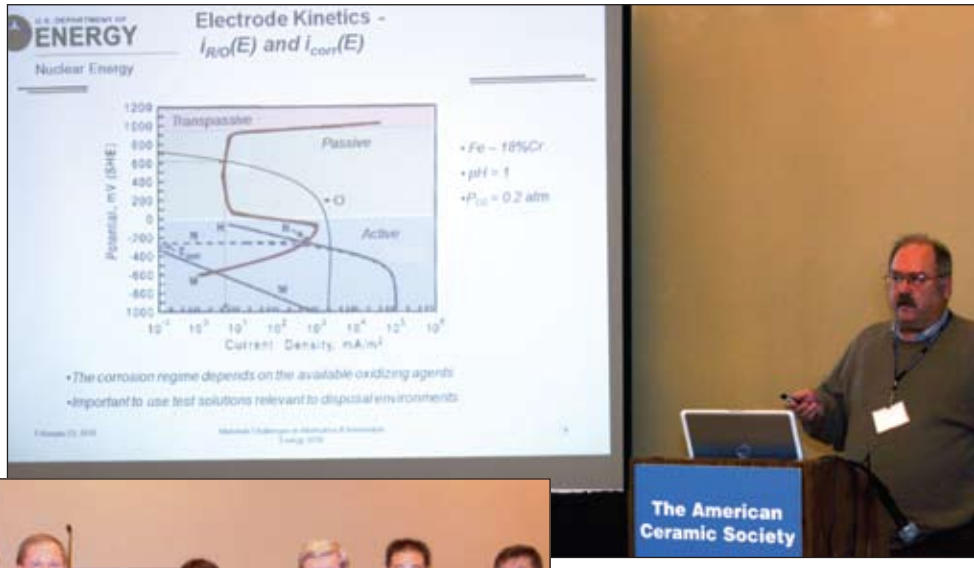
great interactions during the meeting.

In particular, MCARE focused on the themes solar, wind, nuclear, hydropower, geothermal and biomass energy production. Related topics included batteries, hydrogen storage and renewable energy strategies for the transportation industry.

"Having world class experts, such as Yet-Ming Chiang from MIT and Mark Verbrugge from GM, as tutorial speakers set the stage for technical sessions," Wicks says. "The technical sessions went well because we were able to empower a lot of our colleagues to be topic champions to identify presenters and help shape what they thought would be the most valuable sessions."

"Of course, other groups have put on energy conferences, but by focusing this conference on materials challenges, we've invited materials experts who haven't been to this type of conference before," Simon remarks. "They seem to have really responded and appreciated the opportunity, and I think they are really amazed to learn that the challenges to widespread adoption of renewable energy approaches turn out to be materials challenges."

Wicks said that he and Simon also set up this conference to provide plenty of opportunities for networking. "It's amazing whether you are talking about Asia or Israel or South America, there is an exciting collaboration as people are meeting with each other and can find useful and common solutions," says Wicks. "They really start seeing the interconnections in their work." ■



▲ Several MCARE presentations delved into nuclear power innovations.

A delegation from the Institute of Metal Research, Chinese Academy of Science, traveled far for the conference.