

Detroit

The Section held a meeting on October 2. Dr. Vince Battaglia of Argonne National Lab gave a featured overview of "Battery Research Programs of the Office of Transportation Technologies of the Department of Energy." He reviewed Batteries for Advanced Transportation Technologies (BATT) and Advanced Technology Development (ATD) programs and discussed the DOE/industry interaction and key barriers facing lithium technologies for EVs and HEVs.

Dr. Oliver Murphy, CEO of Lynntech, Inc. of College Station, Texas, was featured in the November 14 meeting of the Section. His presentation included a historical profile of the company, the business model on which technology development, and commercialization is based. An overview followed, discussing technology development areas, recent commercialization success stories, and predictions for the future.

The December 4 meeting of the Section featured Bill Orabone, former CEO of Lion Compact Energy of Midland. Mr. Orabone gave a presentation on dual graphite battery technology. According to Mr. Orabone, anions of lithium salts can be intercalated into a carbon or graphite structure much the same as lithium. During charge, lithium is intercalated into the anode and the anion from the lithium salt is intercalated into the cathode. The process is reverse during discharge. While there are some similarities to lithium ion batteries, the technology has the added potential benefit of very low cost and extremely long cycle life. His talk covered the principle, history, and status of dual graphite battery development.

National Capital

The Section met on October 23 in Alexandria, VA. The speaker for this dinner meeting was Prof. Ray Taylor, research associate professor, Center for Electrochemical Sciences and Engineering, Department of Materials Science and Engineering, University of Virginia (UVA). Prof. Taylor's talk, entitled "Incentives for Using Local Electrochemical Impedance in the Investigation of Organically Coated Alloys," discussed an electrochemical mapping and spectroscopy technique

ECS Japan Section

On November 23, Prof. Bruno Scrosati, ECS vice-president, visited the Japan Section at Waseda University in Tokyo. The following were present: Professor Yohtaro Yamazaki, currently chairman of the Section; Professor Shunri Oda of Tokyo Institute of Technology and vice-chairman of the Section; Professor Tetsuya Osaka, Dean of Chemical Engineering of Waseda University; and Dr. Kazunori Takada of the National Institute for Materials Science in Tsukuba.

Professor Yamazaki began with a talk on the activities of the Section, which is one of the largest of the Society. He explained that in order to properly represent all the fields involved in this Section, the chairman is alternately selected from the wet and the solid-state sides. Accordingly, at the end of Professor Yamazaki's mandate (December 31, 2001), the Section will be chaired by Professor Oda, in representation of the solid-state electrochemical community in Japan.

used to investigate the local breakdown of organic coatings. Discussion following the talk involved the effect of solution concentration on the measurements, and the use of additional sets of micro-reference electrodes to probe these effects. Future applications and improvements were also discussed in the context of optimizing data acquisition techniques as to minimize the resolution-specimen area tradeoff.

The Section met on November 27. The speaker for this dinner meeting was Dr. J. A. von Fraunhofer, a professor at the University of Maryland. The subject of his talk involved the potential use of tobacco as a low cost, environmentally safe corrosion inhibitor. Various illustrations of how the addition of tobacco extracts improved corrosion performance were shown. Discussion included environmental safety, inhibitive qualities of similar plants, the unknown effect of de-aeration and diagnostic tests that could illuminate the inhibition mechanism(s).

The Section met on January 22 in Alexandria, VA. The speaker for this dinner meeting was Dr. Kevin Cooper of Luna Innovations Inc. His presentation included a description of fiber optic sensor platforms and some interesting applications. Discussion included the sensitivity and durability of these sensors, and future development of these sensors to detect additional chemical species such as chloride and metal ions.

The Section met on March 12 in Alexandria, VA. The speaker for this dinner meeting was Professor Jan

Talbot from the University of California, San Diego. Her presentation included a description of studies that investigated the electrophoretic deposition (EPD) of zeolites. The discussion included the effect of IR limitations on the sensitivity to water content and the effect of Nafion on zeolite pore size.

Prof. Talbot is the president of The Electrochemical Society and also spoke briefly about the growth of ECS overseas and the coming 100th anniversary meeting of ECS in Philadelphia, PA.

New England

The Section met on March 5. The featured speaker was Dr. Albert Sacco, Jr., the George A. Snell distinguished professor of engineering of the Department of Chemical Engineering at Northeastern University. Dr. Sacco has acted as director of the Center for Advanced Microgravity Materials Processing (CAAMP), a NASA commercial space center at Northeastern.

Dr. Sacco's primary research interests lie within the field of zeolites. He was able to grow zeolite crystals under microgravity conditions. The crystals were very large and had a very low level of defects. Also grown in space were crystals of the protein isocitrate lyase which were also large and very low in defects. It proved possible to determine the crystal structure of the protein to a much higher degree of resolution than with crystals grown conventionally.

Dr. Sacco also discussed his life as a scientist astronaut. ■