

Recognizing Excellence in the Commercialization of New Electrochemical Technology: The IE&EE Division NET Award

by **Dennie T. Mah**



The 2005 IE&EE NET Award was presented to **De Nora Technologie Electrochimiche**, **E-Tek**, and **Bayer Material Science AG**. Attending the ceremony were (from left to right): **JOHN WEIDNER** (IE&EE Secretary/Treasurer), **FULVIO FEDERICO** (De Nora), **HANS-DIETER PINTER** (Bayer MaterialScience), **FRIITZ GESTERMANN** (Bayer MaterialScience), **EMORY DE CASTRO** (E-Tek), and **DENNIE MAH** (IE&EE Vice-Chair).

One of the objectives of The Electrochemical Society (ECS) is to encourage research and dissemination of knowledge in the theory and practice of electrochemistry, solid-state science, and allied subjects. The Society has employed various awards as a tool to recognize outstanding achievement in these fields. Let's face it, nearly all of us work hard for a living. Hopefully, we receive a paycheck and enjoy job security; but, the icing on the cake is recognition by others for a job well done. We tend to feel better when recognized and perhaps more motivated to go the extra mile in our future endeavors. A simple token of thanks is all that is really required. ECS awards range from Society awards (16) to Division awards (21) to Section Awards (11) and to Student Awards (13). Almost all of these awards bestow the honor on an individual and rightfully so. However, the "practice" of electrochemistry, solid-state science, and allied subjects often leads to the introduction of new electrochemical technology into the marketplace at a commercial scale.

Commercial scale implies that products, technology, software, or intellectual property has been sold to a customer as a result of an innovation or invention. Here the "rubber meets



On behalf of **Ballard Power Systems**, **EVELYN LAI** (right) received the 2007 IE&EE Division's NET Award from Division Chair **DENNIE MAH**.



The ECS IE&EE Division presented the 2009 New Electrochemical Technology (NET) Award to **FuelCell Energy (FCE)**. From left to right are: **MOHAMMAD FAROOQUE**, Senior Vice-President and Distinguished Fellow at FCE; **PINAKIN PATEL**, key DFC cell and stack developer at FCE; **JOHN WEIDNER**, IE&EE Chair; and **GERRI BOTTE**, IE&EE Vice-Chair. Other FCE staff who received the award included: **BERNARD S. BAKER** (deceased), who was the research, development, and commercialization pioneer at FCE; **HANSRAJ C. MARU**, the research and development leader in commercially introducing Direct FuelCell (DFC) power plants; **CHAO-YI YUH**, a key developer of the DFC core technology; and **JOEL DOYON**, a key developer of the core DFC components.

the road”— a true testament of the ingenuity of scientists and engineers to meet the needs of society. This step in the evolution of fundamental theory to beneficial industrial, government, and consumer products is typically the result of a collaboration among people, as opposed to an individual, involving a multidisciplinary approach including functions such as research and development, engineering, manufacturing, marketing and sales, and finance under some sort of business umbrella. Hopefully, the commercialization of new electrochemical technology is our contribution to society as a whole.

Only one ECS award meets the need to recognize the team excellence necessary to deliver practical new electrochemical technology to the public at large—the ECS Industrial Electrochemistry & Electrochemical Engineering (IE&EE) Division’s New Electrochemical Technology (NET) Award. Established in 1998 to recognize significant advances in industrial electrochemistry, the NET Award was endowed by the Dow Chemical Company Foundation. Since that time, four sponsoring organizations have received the NET Award, which is offered every odd-numbered year. The

first NET Award was granted to Asahi Glass Company in 1999. In 2005, a collaborative, multi-company effort by three sponsoring organizations (five individual contributors) was presented to De Nora Technologie Electrochimiche, E-Tek, and Bayer Material Science AG. Subsequently, in 2007, Ballard Power Systems (six individual contributors) was recognized; and in 2009, FuelCell Energy (six individual contributors) joined the list of awardees.

The NET Award nominees are submitted by a sponsoring organization, typically a company with core competency in electrochemical technology. The NET nominations are reviewed by an appointed NET Award Committee that judges the merits of the nominations and its conformity to the award rules and then downselects the current awardee. The NET Award is presented at the IE&EE spring annual luncheon and business meeting, followed by a representative of the sponsoring organization giving a NET Award address at the IE&EE Division General Session symposium. Each sponsoring organization receives a NET Award plaque and each individual contributor is presented a NET Award scroll. The NET Award call for nominations appear in the winter and

spring issues of *Interface* a year before the next NET Award ceremony. The next NET Award is scheduled for spring 2011. Please contact any IE&EE Division officer or refer to the ECS website for further information regarding the IE&EE Division’s NET Award. ■

About the Author

DENNIE T. MAH was recently appointed Principal Investigator, DuPont Chemicals and Fluoroproducts, working on next generation fluorochemicals after having served as a Senior Consultant in electrochemical engineering, Reaction Engineering and Thermodynamics, DuPont Engineering Research & Technology (DuET). He has 37 years of broad industrial chemical engineering experience within the DuPont Company encompassing technologies involving pigment dispersion, melt spun and electroblowing fiber production, petrochemical manufacturing, solid-liquid and membrane separations, and electrochemical engineering including inorganic and organic synthesis and PEM fuel cells. He has served as the ECS IE&EE Division Chair. He may be reached by e-mail at doctor_electro@msn.com.