Bruno Scrosati Receives Italgas Prize

ECS President **Bruno Scrosati** has been awarded one of the 2003 Italgas Prizes. The prizes are made up of three sections: Science and Environment, Projects for the Environment, and Debut in the World of Research. The Science and Environment Prize, with an award of 80,000 euros, is awarded to scientists and researchers who have achieved important results in the field of research relative to energy sources and their relation with the environment. The Scientific Commission nominated Michael Graetzel (Germany) and Bruno Scrosati (Italy) to receive this prize. The 2003 Prizes will be awarded at a ceremony to be held in Turin in March 2004.

In 1987, to mark the 150th anniversary of the company's foundation, Italgas instituted, for a period of 10 years, the Italgas Prize for Research and Technological Innovation, with the aim of promoting and creating added value in social and civil development fields. At the end of that ten-year cycle, the company instituted a second five-year cycle of the Italgas Prize, which ended with the 2001 edition. During the course of those 15 editions, 46 European researchers were awarded the Prize, among them Sir Harold Kroto, who was later awarded the Nobel Prize. One of the most important changes introduced in 2003 was to enlarge the scope of eligibility. Candidates, previously restricted to those from Europe, are now considered from countries around the world.

Michael Graetzel, a professor at the Ecole Polytechnique Fédérale de Lausanne, has carried out his research on solar energy conversion by photoelectrochemical cells. His novel cells are able to attain excellent conversion efficiency, and are cheaper, simpler, and more flexible than traditional semiconductor devices. Professor Graetzel is universally credited with the invention of this new technology. The best-known devices produced by this research are called "Graetzel Cells" worldwide.

Bruno Scrosati, a professor of electrochemistry at the University of Rome "La Sapienza," has focused his attention on nanotechnology for the development of new types of electrode and electrolyte materials for advanced batteries and fuel cells. His studies provide consistent evidence that new, morphologically optimized materials approach performance levels required for batteries and fuel cells designed for electric vehicle applications.

Professor Scrosati has received the Research Award from the ECS Battery Division and was the first president of the Society to come from outside North America. Recently, the group led by Scrosati has been included in the European Network of Excellence named "ALISTORE", which is intended to recognize and group together the most prestigious laboratories operating in battery research. ■

Special Events at the ECS Meeting in San Antonio, Texas May 9-13, 2004

Sunday—Short Courses on "Battery Design and Simulation" and "Plasma Processing;" "Transistors and Integrated Circuits for the Rest of Us," by Howard Huff of SEMATECH; Professional Development Workshops; and the Sunday Evening Get-Together

Monday—Plenary Lecture by Jeff Dahn of Dalhousie University; Professional Development Workshops; and the Monday Evening Mixer, Student Poster Session, and opening of the Technical Exhibit

Tuesday—Annual Society Luncheon and Business Meeting; and the Technical Exhibit and Poster Session

Wednesday—Honors and Awards Session featuring the Vittorio de Nora Award Address by Richard Alkire of the University of Illinois; and the Technical Exhibit

See the Program Section in this issue for more details.

Mark C. Williams Receives USFCC Pathfinder Award

The U.S. Fuel Cell Council (USFCC) presented one of four inaugural Pathfinder Awards to **Mark C. Williams**, citing his 18 years of dedicated government leadership to the fuel cell industry. The USFCC Pathfinder Award will be an annual award, presented to people outside the fuel cell industry who have been particularly helpful to the industry. The USFCC is an industry association dedicated to fostering the commercialization of fuel cells in the United States. Its members include the world's leading fuel cell developers, manufacturers, suppliers, government agencies, and customers. The USFCC provides technical advice, collects information, and issues reports on the industry and industry segments, works to raise public awareness of fuel cells and their potential, conducts fuel cell education programs, provides networking opportunities for developers and potential customers, and establishes links to comparable activities in the U.S. and around the globe. Recognizing the leadership of key government managers responsible for technology research and development with the fuel cell industry is noteworthy given the potential global impact of fuel cell technology and the hydrogen economy. This leadership is critical to cooperative and collaborative efforts to establish a commercially viable fuel cell industry.

Dr. Williams is the Fuel Cells Product Manager at the U.S. Department of Energy (DOE), National Energy Technology Laboratory. He is responsible for the stationary power fuel cell program of the DOE's Office of Fossil Energy. He has worked in almost every aspect of the energy industry: coal, oil, and gas utilization and production; and in electric power generation at AMOCO, CONOCO, DOE, and the University of California, Berkeley. He is also an adjunct professor at both West Virginia University and the University of California.

Dr. Williams received a PhD in engineering from the University of California, Berkeley where he studied under a Jane Lewis Fellowship, and completed his BA, BS, and MS at West Virginia University in Morgantown, WV. His professional memberships include: member, Organizing Committee of the Fuel Cell Seminar; member, Society of Petroleum Engineers; member, The Electrochemical Society; member, American Institute of Chemical Engineers; member, Institute of Electronics and Electrical Engineers; and member, American Society of Mechanical Engineers. He has been an invited lecturer at the Brookings Institution; serves on the editorial board of an international energy journal; served on ASME PTC-50 committee on power systems performance; assists in presenting fuel cell short courses; and participates in many fuel cell forums, workshops, and roundtables in the U.S. and abroad. He was elected co-chair of the Fuel Cell Seminar, the largest international meeting on fuel cells, for 2002 and for 2003. He has published widely and also holds several fuel cell technology area patents.

Dr. Williams is a member of the Executive Committee of the High Temperature Materials Division of The Electrochemical Society, and has delivered the keynote opening lecture at every biennial International Symposium on Solid Oxide Fuel Cells since its inception in 1989. ■

ECS Online

ECS is a unique source of information about and for the electrochemical and solid-state science and technology community. You can access this valuable resource online—start with the ECS home page at **www.electrochem.org.**

Electronic Journals—Available to members and subscribers, both of ECS's peer-reviewed journals are available online. *Electrochemical and Solid-State Letters* is the first rapid-publication electronic journal in its field. Articles are posted online as soon as they become available. The *Journal of The Electrochemical Society,* also published online, contains full-length papers covering the breadth of solid-state and electrochemical science and technology.

Electronic Meeting Abstracts—Free electronic access to any abstract from any upcoming meeting via the ECS website. Starting with the San Antonio Meeting, paper copies of meeting abstracts will not be available or distributed at the meeting. Any person or meeting attendee who wishes to have paper copies of abstracts should download paper copies of abstracts via the ECS website.

"Members Only" Section—ECS members can exchange resumes and job listings, join a private scientific discussion forum, and access the membership directory.

Interface—The online edition contains live links to referenced material. See "Tech Highlights" in every issue for a synopsis of the most interesting papers recently published in the ECS journals. Then just click on the links for your free access to the full-text articles.

Book Store—Use the online catalogue and the ECS search engine to perform keyword searches on any titles, words, or authors that appear in ECS publications, including *Journal, Letters,* and *Interface* articles, proceedings volumes, meetings abstract volumes and articles, and monograph volumes.

In Memoriam

Brian Charles Hilton Steele

1929-2003

Brian Charles Hilton Steele was born in Lancashire, U.K. on May 10, 1929, passed away on August 11, 2003 at the age of 74. He was educated at the King George the V Grammar School in Southport, U.K. Following his national service in the Royal Air Force from 1947 to 1949, he studied chemistry at the University of Birmingham, and graduated from there in 1952. He started his career in ceramics when he joined the British Ceramics Research Association in Stoke upon Trent, where he worked as a scientific officer until 1955. His interest in solid-state ionics began in 1957 while he was working in London with the Morgan Crucible Company as a project leader. In that same year, he left Morgan Crucible and joined the Department of Metallurgy at Imperial College to become a Nuffield investigator where he undertook postgraduate study in solid electrolytes, under the supervision of the late Professor Ben Alcock. In 1965, he was awarded a PhD for his work on galvanic cells for thermodynamic studies and joined the academic staff at Imperial College and he stayed at Imperial until he retired as Professor of Materials Science in 1994.

Brian was one of the founding fathers of the new field of solid-state ionics, a subject he was instrumental in developing and tireless in promoting. Solid-state ionics includes the study of the active materials for advanced batteries and fuel cells, a field which is now very much in the forefront because of the growing concerns for generation and storage of electrical energy and its impact on the global environment. His early work covered novel oxygen ion conductors, and sensors for industrial boilers. In the late 1970s and early 1980s, he was associated with the development of lithium-ion batteries and became heavily involved in the development of the TiS_2 insertion cathodes while acting as a consultant to Exxon Corporation. In the late 1980s and early 1990s, he was one of the very few people around the world to champion the solid oxide fuel cell (SOFC) and has been instrumental in the development of the SOFC in Europe. His first paper appeared in 1955 dealing with diffusion in chrome-magnesite bricks and since that date he has published over 200 papers, the majority dealing with either high energy density batteries or fuel cells.

In the latter part of his career, he became increasingly convinced that the most sensible route for the commercialization of SOFCs was to bring down the temperature of operation from close to 1000°C to temperatures below 600°C where the problems of sealing and durability are ameliorated. He began working on materials for these lower temperature fuel cells and spent many years persuading companies around the world to adopt these materials for use in their SOFC programs. This culminated in the formation of an Imperial College spin-off company, Ceres Power Ltd, being formed with Steele being the major driving force behind its establishment. Sadly he did not see the company develop to full maturity but he did see his ideas translated into prototype devices.

During his distinguished research career, Dr. Steele received many awards for his pioneering work including the Schoenbein medal for SOFC research, awarded in 1994 by the European Fuel Cell Forum; the Kroll Medal of the Institute of Mining Metallurgy and Materials for metallurgical and ceramic chemistry in 1995; and finally the MBE in 1996 (Member of the Order of the British Empire, conferred by the Queen) for services to materials science. He served the scientific community well, serving on multiple advisory panels for the European Commission and for Engineering and Physical Sciences Research Council and he was one of the founders of the journal *Solid State Ionics*, and for many years he was its coordinating editor for Europe.

Brian was also a dedicated family man. He liked nothing more than to be with his three children and grandchildren. He loved France and spent many summers in a house he purchased in southern France. He was also a keen walker and loved to walk in the Surrey hills and in his native northern England. Brian is survived by his widow Ruth and their three children. ■

This notice was contributed by Professor John Kilner, Imperial College, London, U.K., and Dr. S. C. Singhal, Pacific Northwest National Laboratory, Richland, Washington, U.S.

In Memoriam

L. Reed Brantley (1906-2003), member since 1948, Corrosion.

H. Aubrey Clay (d. 2003), member since 1969, IE&EE.

Harold Ebneth (1924-2003), member since 1990, Dielectric Science and Technology.

Mario Maja (1934-2003), member since 1979, Battery.

Richard J. Millard (1918-2003), member since 1955, Dielectric Science and Technology.

Leon Robbin (1901-2003), member since 1945, Battery.

Robert F. Walton (1926-2003), member since 1959, Electrodeposition.

In Memoriam

Frank J. Biondi

1914-2003

FRANK J. BIONDI, a long time member of The Electrochemical Society and an executive at AT&T Bell Laboratories, died on October 5, 2003 at the age of 89. He obtained his BS summa cum laude from Lehigh University and joined Bell Laboratories in 1936 to work on wood preservation and the development of synthetic plastics. In 1940 he received an MS from Columbia University. During the World War II years he worked on the Manhattan Project developing a process for the large-scale manufacture of porous metal materials for use in the gaseous diffusion of uranium isotopes. After the war he returned to Bell Laboratories, supervising a group to choose and develop materials for electron tubes, and, after the development of the transistor in 1948, for the solid-state diodes and transistors, solar cells, and numerous other devices. In 1962 he was promoted to Director of the Electron Device Materials and Processes Laboratory. He assumed responsibility for the development of many processes and technologies including electroplating, wet etching, and design of lead-acid, secondary lithium, and nickel-cadmium batteries.

During the period 1953-1954, Biondi led efforts to persuade semiconductor materials and process scientists and engineers to consider ECS their primary home. The first Electronics Division semiconductor sessions were held at the 1953 spring ECS meeting in New York. At that time, the three main interest groups of the Division included luminescence, general electronics, and rare metals. (Later, the luminescence group would form its own Division.) The Electronics Division was also among the first to prepare extended abstracts for its regular papers, as early as 1952. Biondi was interviewed in March 1996 by Arnold Thackray, now president of the Chemical Heritage Foundation (CHF). This oral history was one of several sponsored by The Electrochemical Society and is accessible at CHF in Philadelphia.

In addition to The Electrochemical Society, Biondi was active in the American Electroplaters Society, IEEE, ASTM, and the Society for the Advancement of Materials and Process Engineering. After his retirement from Bell Laboratories, he founded and was president of Bond Engineering, a consulting firm. In addition to his professional life, he was active in local politics in Livingston, NJ serving in many positions including as mayor. He was also a member of the Board of Trustees of the Hospital Center at Orange for 25 years.

He is survived by his sons Robert, Frank, Jr., and Michael; eight grandchildren; and two great-grandchildren. ■

This notice was submitted by Robert P. Frankenthal.

In Memoriam

Charles H. Lemke

1913-2003

CHARLES H. LEMKE, of Wilmington, Delaware, died at the age of 90 on October 27, 2003. Dr. Lemke was a graduate of Ohio State University with a BS in metallurgical engineering and an MS in engineering. He was a member of the Phi Eta Sigma honorary fraternity and the Tau Beta Pi honorary engineering society. He had a forty-year career as a research associate with the DuPont Company in Niagara Falls, New York, and since 1969, in Wilmington, Delaware. Dr. Lemke held several patents at DuPont, including one for sodium cooling of atomic reactors. After he retired from DuPont in 1976, he worked for the University of Delaware on projects relating to the commercialization of intellectual property developed at the university.

Dr. Lemke most recently lived at Methodist Country House in Wilmington, Delaware, where he became an advocate for the residents and staff. He started the Caring Friends visitation program there and was the leader of the prose and poetry group. Dr. Lemke's wife, Frances Cornell Lemke, died in 1999 after the couple had been married for 60 years. Survivors include one son, James C. Lemke; one daughter, Mary Lemke Waters; as well as six grandchildren.

Charles Lemke had been a member of The Electrochemical Society since 1945 and was a contributor to the Society's Centennial Campaign in its inaugural year. ■