



July 17, 2024

Dear ICS members,

It is with deep sadness that we announce that Dr. Shimshon Gottesfeld, a former faculty member at Tel Aviv University and founder of CellEra Technologies Inc., passed away on July 6, 2024.

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Dr. Shimshon Gottesfeld (1941 – 2024)

Shimshon Gottesfeld was born in Haifa on March 17, 1941. He obtained his D.Sc. in chemistry in 1970 from the Technion. In 1972, following postdoc research, he joined the School of Chemistry at Tel Aviv University and was promoted to Assoc. Prof. He focused his research on electrochemical interfaces using spectroscopic techniques. He studied fundamental and applied aspects of electrocatalysis and photoelectrochemical energy conversion processes. From 1977 to 1979, he spent an extended sabbatical at the Bell Labs in Murray Hill, NJ, investigating electrochromic materials. In 1984, he started another sabbatical leave at Los Alamos National Lab (LANL), stayed there, and in 1987, became a Technical Project Leader of the LANL Fuel Cell Research program. The work of this team at LANL during the 1980s and 1990s created a world-recognized technology enabling polymer electrolyte fuel cells (PEFCs) and direct methanol fuel cells (DMFCs). During that period, Dr. Gottesfeld also initiated and directed R&D work in ultracapacitors based on electronically conducting polymers as active materials.

Between 1996 and 2000, Dr. Gottesfeld represented the US National Laboratories on the Fuel Cell Technology Steering Committee of the Partnership for the New Generation Vehicle (PNGV). In 1999, he was appointed a Laboratory Fellow at LANL. In 1999, he was elected a Fellow of the Electrochemical Society. At the same time, he co-initiated the series of Gordon Research Conferences on Fuel Cells, which remain to this day the highest-level annual meeting devoted to fuel cell science and technology. In December 2000, Dr. Gottesfeld took entrepreneurial leave from LANL to become CTO of MTI Microfuel Cells in Albany, NY. He led the development of direct methanol fuel cells at MTI for use in advanced power sources for portable electronic applications. Under his technical leadership, a novel platform that enables significant DMFC power system simplification was a central development of the DMFC technology at MTI.

In 2007, Dr. Gottesfeld co-initiated a new start-up company, CellEra Technologies, where he was CTO and a board member until 2015. CellEra initiated the development of a new polymer electrolyte fuel cell technology, AMFC, based on non-Pt catalysts and inexpensive stack hardware. CellEra has brought AMFC technology to the point of a demonstrated system for backup power, with a 2 kW AMFC stack built in-house based on novel core technology and field-operated for several thousand hours. In 2012, Elbit Systems Ltd. purchased CellEra, which still constitutes Elbit's core energy group.

Dr. Gottesfeld received the 2006 Grove Medal for Fuel Cell Science and Technology, the 2008 Fuel Cell Seminar Award for achievements in the Science and Technology of Membrane Electrolyte Fuel Cells, and the 2014 George Schuit Lectureship from the University of Delaware. In 2015, he became an Adjunct Professor at the Department of Chemical Engineering at the University of Delaware, combining teaching and research in electrocatalysis and electrochemical power sources. In May 2019, the Electrochemical Society held a special symposium on Advances and Perspectives on Modern Polymer Electrolyte Fuel Cells in honor of Gottesfeld. Shimshon is survived by three children, Ziv, Noga, Orly, his second wife, Marcia Zalbowitz, and grandchildren.

The ICS and the entire community of Israeli scientists mourn the loss of an innovative chemist and entrepreneur.