

Professor Gideon S. Grader

Prof. Grader joined the Technion Faculty of Chemical Engineering in 1990. In 2007, he became the Founding Director of the Nancy and Stephen Grand Technion Energy Program (GTEP), a position he held until 2015. The Center aims to ensure the university's role as a key player in energy research. Prof. Grader has served as the department's Dean 2016-2019.

Prof. Grader's research focuses on the development of ceramics for energy applications, combustion of non-carbon fuels and hydrogen generation. His recent research centers on creating new ways to produce hydrogen from water by advanced electrolysis methods. In cooperation with Prof. Rothschild from the Material Science department, he developed an innovative way to simplify the process and save about 25% in the energy required to produce the hydrogen. Their results were patented and published in Nature Materials in 2017 and Nature Energy in 2019. A new Technion startup company, H2Pro, was launched in 2019 to commercialize this technology.

Ultralight ceramic foams developed by Prof. Grader are used commercially for high-temperature insulation in numerous industrial applications. These novel materials, which are both safe and environmentally friendly, can become an economical substitute for asbestos and other potentially harmful ceramic fibers now in use. The foams are produced by CUMI, an Indian company that licensed the technology and took over a Technion startup company, Cellaris, which developed the product.

Born in Jerusalem, Prof. Grader received his bachelor's degree in chemical engineering from the University of California, Berkeley, where he graduated first in his class in 1982. He received his doctorate in chemical engineering from California Institute of Technology in 1986. From 1987 to 1989, he was a member of the technical staff of the Ceramic Materials Department at the AT&T Bell Laboratories in New Jersey, where he also spent a sabbatical year as a visiting scientist in 1996.

Prof. Grader's work has been recognized with a number of awards, including the Kenneth T. Whitby Award, an Alon grant, the Goldberg Prize for Excellence in Research, the Hershel and Hilda Rich Technion Innovation Award, and the Henry Taub Prize for Excellence in Research.