

## University of Haifa

The Senate of the University of Haifa, by virtue of the authority vested in it by the constitution of the University and in accordance with the recommendations of the President and the Executive Committee

hereby confers upon

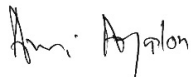
**Dan Shechtman**

the degree of

**Doctor of Philosophy, Honoris Causa**

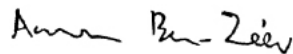
in recognition of his scientific breakthrough resulting in the birth of a new field in science, a unique accomplishment achieved by few others; his uncompromising belief in the scientific truth of his discovery despite persistent opposition from senior researchers in the scientific community, and the lesson he teaches that loyalty to truth will ultimately defeat critics; his reminding us that science deals first and foremost with findings and that scientists must never distort findings to serve any other interests; for his deep friendship with the University of Haifa and the great honor his excellence has brought to the city of Haifa and the State of Israel.

Conferred in Haifa, Israel  
13 Sivan 5772/June 3, 2012



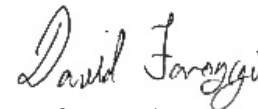
**Ami Ayalon**

Chairman of the Executive Committee



**Prof. Aaron Ben-Ze'ev**

President



**Prof. David Faraggi**

Rector



# PROFESSOR DAN SHECHTMAN

Nobel Laureate in Chemistry for 2011

Prof. Dan Shechtman was born in 1941 in Tel Aviv. He earned a bachelor's degree in Mechanical Engineering in 1966, a master's degree in Materials Engineering in 1968 and a Ph.D. in the same field in 1972 – all from the Technion-Israel Institute of Technology. The following three years, he worked in the American Air Force Aerospace Research Laboratories, where he studied the microstructure and physical metallurgy of titanium aluminides. In 1975, he joined the faculty of the Department of Materials Engineering at the Technion and later served as head of the department. He has served as professor at the Technion since 1986 and today is Head of the Wolfson Center for Interface Science. Prof. Shechtman is a member of the Israel Academy of Sciences, American National Academy of Engineering and European Academy of Sciences.

In 1981, while on sabbatical at the University of Maryland, Prof. Shechtman studied rapidly solidified aluminum transition metal alloys. During this study he discovered, using an electron microscope, a crystal that was not supposed to exist according to accepted theory. Prof. Shechtman began to develop the theory that would explain his discovery.

His findings were fiercely opposed by members of the scientific community in the field of crystallography (the study of crystals), who were persistent in characterizing Prof. Shechtman as a traitor in this field. Devoted to the truth of his scientific discovery and unwilling to compromise in order to better his name or improve his standing in the scientific community, Prof. Shechtman continued his experiments to prove the accuracy of his findings. His strong devotion to his truth, together with the fact that it was based on methodical and excellent scientific work, convinced more and more scientists to accept the accuracy of his findings. Over the years, additional explanations have been developed to legitimize Prof. Shechtman's findings. This led to international recognition for a new branch of science called quasiperiodic crystals that, in essence, Prof. Shechtman had developed and which resulted in a new scientific definition of the term "crystal".

Other research performed by Prof. Shechtman over the years dealt with the development of an alloy based on titanium and aluminum. His study of the defect structure of CVD diamond on its growth and properties continued during his sabbatical at the U.S. National Institute of Standards Technology in 1992-1994. Prof. Shechtman is currently working on developing new magnesium alloys, employing advanced processes to find different applications.

As Prof. Shechtman's impressive breakthrough began to be understood by the scientific community, he was awarded many prizes, including The International Prize of the American Physical Society (1987), Rothschild Prize in Engineering (1990), Weizmann Science Award (1993), Israeli Prize in Physics (1998), Wolf Prize in Physics (1999), Gregory Aminoff Prize in Crystallography of the Swedish Academy of Sciences, EMET Prize in Chemistry (2002), and more.

The most revered of all prizes, the ultimate stamp of approval for his immense achievement, was the Nobel Prize in Chemistry, which was bestowed upon Prof. Shechtman in 2011.