

Prof. Noam Eliaz
Department of Materials Science and Engineering
Tel Aviv University

Research interests: Biomaterials, Bio-Ferrography, Failure Analysis, Corrosion, Electrodeposition

Personal website: <http://www.eng.tau.ac.il/~neliaz/index.html>

Professor Noam Eliaz is a full professor and the founding Chair of the [Department of Materials Science and Engineering](#) (DMSE) at Tel Aviv University (TAU).

He completed his B.Sc., *magna cum laude* in Materials Engineering from Ben Gurion University (BGU) in 1991. Afterwards, he served for three years in the Department of Materials and Failure Analysis of the Israeli Air Force (IAF). While serving in the IAF, Eliaz was involved in two projects that were selected in 2010 as having the second and third highest impact on the IAF among all engineering projects carried out in the materials area over the past 60 years. In 1995, he returned to BGU to simultaneously pursue a Ph.D. in Materials Engineering (direct track, graduated *summa cum laude* in 1999) and an M.B.A. (graduated *magna cum laude* in 1998). His Ph.D. work was recognized by the Israel Ministry of Science's Eshkol Scholarship for Scientific Infrastructures, as well as by BGU's Provost Prize. As a Fulbright and Rothschild Fellow at MIT, he conducted his post-doctoral research in the H.H. Uhlig Corrosion Laboratory in the DMSE. In August 2001, he joined the academic staff of TAU in Mechanical Engineering, and in August of 2013 he became the founding Chair of the DMSE.

Prof. Eliaz's research is interdisciplinary and combines basic scientific research with applied research and development. Examples include: (1) development of novel electrochemically-deposited hydroxyapatite coatings for orthopedic and dental implants; (2) the use of Bio-Ferrography for diagnosing osteoarthritis or cancer, determining the efficacy of drug treatments, and monitoring the wear of artificial joints; (3) study of corrosion in different environments (from aircraft and space to the human body); (4) development of functional electrochemical coatings (e.g. rhenium coatings resistant at high temperatures and in aggressive environments for aircraft, aerospace and catalysis applications); and (5) failure analysis. He has won research grants on a total amount of more than four millions of dollars. The products of his research are being used in defense organizations and implant companies. As the Chief Scientist of a dental implants manufacturer, he is currently leading a process of scaling-up a hydroxyapatite coating that he developed at TAU. He is currently a member of MRS, ECS, ISE, NACE International, and the Society for Biomaterials.

Prof. Eliaz has published over 360 research publications, including 3 edited books and 6 book chapters. He was the editor of a double volume of Modern Aspects of Electrochemistry (Springer) on Applications of Electrochemistry and Nanotechnology in Biology and Medicine, as well as a book on Degradation of Implant Materials (Springer). He has spoken at dozens of plenaries and has been invited to contribute his expertise at international conferences and seminars worldwide. His papers are well cited, with over 2,300 citations according to the Web of Science and h-index of 26. He

is the Editor-in-Chief of [Corrosion Reviews](#), one of the best journals dedicated to corrosion. He has won numerous awards including: the 2010 Herbert H. Uhlig Award, the 2012 Fellow Award, and the 2014 Technical Achievements Award – all three from NACE International, the largest and premier corrosion association worldwide; the Eshbach visiting scholarship of the McCormick School of Engineering and Applied Science at Northwestern University (2013); Fellow of The Japanese Society for the Promotion of Science (JSPS, 2005-7); Dan David scholarship for young investigators (2002); the T.P. Hoar Award for the best paper published in Corrosion Science during 2001, and many others. In 2015 he has elected as a member of [The Israel Young Academy](#).

Prof. Eliaz has demonstrated academic and scientific leadership in Israel and abroad. He has served as chair and member of numerous committees, for example: Chairman of the Israel Section of NACE International, Chairman of Central Committee 300 for Chemistry Standards at the Standards Institution of Israel (SII), Chairman of the [14th Israel Materials Engineering Conference](#), etc. He is recognized as the leader of the development of the materials discipline at TAU, and was the founding Head of the Materials and Nanotechnologies graduate program at TAU.

Prof. Eliaz has advised 6 Ph.D. students, 5 postdoctoral scholars (3 of whom currently hold faculty positions in Israel, India and China), 2 visiting scientists, 22 M.Sc. students and 13 B.Sc. students. His group members have garnered prestigious accolades including the Israel Defense Prize, the Chief of Staff Medal of Appreciation (Israeli military decoration), the Israel Atomic Energy Commission best poster award, the Israel Ministry of Science and Technology scholarship for the promotion of excellent female graduate students in science, a Fulbright post-doctoral scholarship, best oral and poster presentations at international conferences, and many more.

Prof. Eliaz is an 8th generation Israeli. He is married to Billie and the proud father of Ofri, Shahaf and Shalev.