



Dear ICS members,

It is my great pleasure to announce the 2024 ICS Gold Medal winners, **Prof. David Cahen** of the Department of Molecular Chemistry and Materials Science, Weizmann Institute of Science, for his pioneering and fundamental contributions to thin-film photovoltaic cells, renewable energy, and biomolecular electronics; and **Prof. David Avnir** of The Hebrew University of Jerusalem, for pioneering hybrid organic-inorganic materials, including sol-gel functional materials, chiral nano-objects, and experimental-theoretical approach to quantitative chirality.



Prof. David Cahen

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Prof. David Avnir

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David Cohen was born in 1947 in Vught, the Netherlands. After high school, he moved to Israel, obtained his B.Sc. in chemistry and physics from the Hebrew University of Jerusalem (1966-69), M.Sc. (1969-70), and Ph.D. (1970-73) in physical chemistry and materials research at Northwestern University, including a long winter break at Stanford University. David returned to Israel for postdoctoral research on photosynthesis biophysics at the Hebrew University and the Weizmann Institute of Science (WIS). He joined the Weizmann Institute as a faculty member in 1976. Cahen co-pioneered photo-electro-chemical solar cells with built-in storage and developed novel experimental means to determine solar cell loss mechanisms. In further solar cell work, he discovered semiconductors' self-healing, surface doping, and molecular control over semiconductor junctions. He focuses on opto(bio)-electronic materials chemistry and physics, emphasizing making such materials sustainable, especially self-healing of energy materials and proteins as electronic materials. An AVS, MRS, and Helmholtz International fellow and visiting professor at Chiba University, he is also active in energy and sustainability (E&S) research (founding director) and education (organizes and teaches local and international E&S courses; co-edited and wrote Materials for E&S textbook), and in science for peace efforts. From 2017-2022, he also ran a Bar-Ilan Univ research group. He headed the Materials and Interfaces Department. David has published over 400 papers with over 47,500 citations and an h factor of 109 (Scholar).

David Avnir was born in 1947 in a refugee camp in Germany, and his family made aliya in 1949. He received all his education at the Hebrew University, including a Ph.D. under Prof. J. Blum (1977). Following two years of post-doc and one year at Plantex, he joined the Hebrew University (1980) and became a Full Professor in 1988. He served as Head of the Institute of Chemistry. Avnir's diverse research program includes (1) sol-gel materials, incorporating organic and bioorganic molecules within ceramic materials for optics, reactive materials, catalysts, and bioactivity. (2) Fractally disordered materials, including analysis of materials' complexity in terms of scaling properties. Observing the complex, random, and amorphous geometry of natural and synthetic materials, he explained how their surfaces interact with the surrounding world, characterizing, understanding, and predicting their structural correlations with reactivity. (3) Studying chirality and symmetry of molecules and materials on the nanoscale, both computationally and experimentally. He developed a methodology for quantitative evaluation of these structural properties, generalizing chiral imprinting of oxides. (4) Avnir pioneered (in 2002) the molecularly doped bulk metals family. He discovered many traits of these materials, including conductivity, catalytic activity, and induction of unorthodox properties to metals, such as rendering a metal acidic or basic, forming bioactive metals by enzyme entrapment, and induction of corrosion resistance in iron. Avnir mentored over 65 graduate students and published over 420 papers with over 41,000 citations and an H index of 86 (Scholar). He received the 2004 Kolthoff Award of the Technion, the 2010 ICS Prize for Outstanding Scientist, became a Member of the Academia Europaea (2009), a Distinguished Scientist by the Chinese Academy of Sciences (2018), and the Lifetime Achievement Award of the International Sol-Gel Society (2013).

The award ceremony will occur on February 18, 2025, during the 88th ICS Annual Meeting.

Congratulations to David and David for their achievements!

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