החברה הישראלית לכימיה
THE ISRAEL CHEMICAL SOCIETY
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Dear ICS members,

It is my great pleasure to announce that the 2018 ICS Gold Medal will be awarded to **Prof. Shimon Vega** of the Weizmann Institute of Science for groundbreaking theoretical and experimental contributions to solid state NMR; in particular for the elucidation of multiple quantum spectroscopy, dynamic nuclear polarization and the unique Floquet analysis; and **Prof. Nimrod Moiseyev** of the Schulich Faculty of Chemistry at the Technion for pioneering work on resonance states in atoms and molecules and for introducing the theory of non-Hermitian quantum mechanics, which had a remarkable impact on experimental chemistry and physics.

Prof. Shimon Vega
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Prof. Nimrod Moiseyev
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Shimon Vega was born in Amsterdam in 1944 and obtained both his B.Sc. and M.Sc. in Physics in Holland. Following the Six-Day War he made alyiah, and completed his Ph.D. with Prof. Zeev Luz on Nuclear Quadrupole Resonance. Already as a Berkeley postdoc with Alex Pines, Shimon made pioneering discoveries in the new field of multiple-quantum NMR, while developing the basis for the fictitious-spin-½ formalism that is nowadays a main tool for understanding NMR in solids and liquids. Upon returning to the Weizmann Institute as junior faculty Shimon furthered these studies to half-integer quadrupolar nuclei, species that conform the majority of nuclei in the Periodic Table, and made propositions that enabled a wide variety of materials-oriented NMR research. In the early 1980s Shimon launched into magic angle spinning (MAS) investigations when MAS was largely viewed from a continuous-wave perspective. Shimon departed from this limited perspective, recognized the complex time-dependencies that underlie this coherent process, and analyzed it with Floquet theory tools to lay the foundations of many contemporary spin-1/2 experiments. This insight was extended to deal with multiple, non-commensurate time-dependent processes, in efforts that lead to ^{1}H solids NMR experiments of common use worldwide. During the last decade Shimon embarked on understanding the electron to nuclear magnetization transfer mechanism underlying dynamic nuclear polarization, delivering the insights that are again molding experiments in this area. He performed all these studies while taking leadership positions at the Weizmann as well as at MIT, Washington University and Leiden, mentoring graduate students and postdoctoral fellows who are nowadays leaders at the forefront of magnetic resonance. Shimon's achievements have been recognized by many prizes, including the Kolthoff, ISMAR and the 2003 ICS Prize for the Outstanding Scientist.

Nimrod Moiseyev was born in Israel (1947), obtained his B.Sc. in Chemistry from Bar-Ilan University, M.Sc. in Chemical Physics from the Weizmann Institute (1972), and Ph.D. in theoretical chemistry from the Technion (1977) with Jakob Katriel. In 1980, following a postdoctoral research with Philipp Certain at the University of Wisconsin, he joined the department of chemistry at the Technion and became a full professor in 1988. He established the Institute of Advanced Studies in Theoretical Chemistry, and had a joint appointment in the Department of Physics. He was a visiting scholar at Austin, Texas, UCLA, Harvard, Heidelberg and UPenn. In 1993 he founded the Technion excellence program and headed it for 15 years. His long list of scientific achievements includes pioneering contributions to the fundamental understanding of the resonance phenomena in nature, namely, the dynamics of unstable quantum states. His theory of non-Hermitian quantum mechanics allows for mathematical description as well as practical computations of resonance states. He implemented the theory in the study of unimolecular chemical reactions, electron-atom and electron-molecule scattering, atom/molecule surface collisions, Auger and Interatomic Coulomb Decay processes, the interaction of electromagnetic radiation with atoms and molecules, and light scattering. His theoretical work motivated numerous experiments in chemical physics and optics worldwide. In addition, he has been an outstanding mentor, as many of his former students hold top academic and industrial positions in diverse fields, including theoretical chemistry, biochemistry, experimental physical chemistry, theoretical physics and mechanical engineering. His long list of prizes and honors includes the 2006 ICS Prize for the Outstanding Scientist, the Humboldt award, the Landau award, the Medal of CMOA, as well as two dedicated journal volumes (*J. Phys. B.* and *Molecular Physics*).

The award ceremony will take place during the Gala Dinner of the 84th ICS Annual Meeting on February 12, 2019.

Congratulations to Shimon and Nimrod for their achievements!

Ehud Keinan