החברה הישראלית לכימיה
THE ISRAEL CHEMICAL SOCIETY
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Dear ICS members,

It is my great pleasure to announce that the **2014 ICS Excellent Young Scientist Prize** will be awarded to **Prof. Dmitri (Dima) Gelman** (dgelman@chem.ch.huji.ac.il) of the Hebrew University of Jerusalem for the development of novel pincer complexes for catalytic transformations, and to **Dr. Edvardas (Ed) Narevicius** (enarevicius@gmail.com) of the Weizmann Institute of Science for his pioneering contributions to the field of Cold Chemistry and molecular beam experiments.

Dima Gelman (b. 1974) received his B. Sc. (1996) and Ph. D. (2002 with Prof. Jochanan Blum, *Summa Cum Laude*) from the Hebrew University. In 2004, after two years of a post-doctoral research with Prof. Stephen L. Buchwald at MIT, he joined the Institute of Chemistry at the Hebrew University. Focusing his research on organometallic catalysis, his highly prolific research group has designed and prepared novel catalytic systems for organic synthesis. In particular, they developed practical catalysts capable of activating and functionalizing inert carbon-hydrogen and carbon-carbon bonds via hydrogen transfer reactions. They developed a new class of electron-rich 3-D bifunctional PC(sp^3)P pincer complexes with pendant functional groups that allowed for unique chemical transformations, such as mild and selective acceptor-less dehydrogenation reactions and controlled hydrogen formation from formic acid. They utilized this process as a key step in highly selective hydrogen transfer reactions and also discovered new modes of CO_2 fixation, which could lead to the utilization CO_2 as a raw material for organic synthesis.

Ed Narevicius (b. 1973) received his B. Sc. in Chemistry (1995, Summa Cum Laude) and Ph. D. (2002 with Prof. Nimrod Moiseyev) from the Technion. In 2008, after a post-doctoral research with Prof. Mark G. Raizen at the University of Texas at Austin he joined the Chemical Physics Department at the Weizmann Institute of Science. He has succeeded with brilliant originality and hard work to make a major breakthrough in experimental low temperature physics and chemistry and this work has been published in Science and Nature Chemistry, attracting worldwide attention. Reaching the quantum regime in chemistry has been a long-standing goal. Following the first experiments of Lee and Herschbach that earned them the 1986 Nobel Prize in chemistry, many groups tried to push the collision energy down using cold molecular beams formed by supersonic expansion. These experiments met a "magical" limit of about 5 Kelvin, which was just not enough to reach the energies where quantum phenomena start dominating the reaction dynamics. The main obstacle was the high mean velocity ranging from several hundred to a few thousand m/s. Many groups raced to stop the cold beams over the past 40 years, but with limited progress. In 2012 Ed proposed and demonstrated a new way to break the 5 K limit with a new type of experiment. Instead of trying to stop the molecular beam, Ed used two beams and deflected one of them in such a way that it overlapped with the other. Although both beams were travelling fast, the relative velocity in the moving frame of reference vanished, reducing the relative collision energy to 0.01 K. This breakthrough enabled Ed to observe a long sought quantum behavior in chemical reactions at ultra-cold energies, as well as an unusual isotope effect, taking place in the cold energy domain.

The award ceremony will take place during the first day of the 80th ICS Annual Meeting in February 17, 2015.

Congratulations to Dima and Ed for their achievements!

Ehud Keinan