

Theme Seminar - "Sustainable development through Chemical Sciences"

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Humankind Faces a Bright Future, and so Chemistry

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As a result of the population growth, mankind faces severe global challenges, including limited availability of energy, raw materials, food, fresh water, air quality, and health problems, which seem daunting because they cannot be solved on the basis of our current technologies. Since the times of Thomas Malthus (1800) till these days, ignorant prophets and cynical politicians have always come up with apocalyptic predictions for the future of humanity. In contrast, I predict that the humankind will survive on this planet for many years to come, that the above-listed challenges will be met by yet unknown technologies, and chemistry will play a central role in any solution. The future of humankind seems brighter than ever for 5 main reasons:

1. The explosion of human knowledge outgrows the explosion of population.
2. Science is totally unpredictable.
3. Social networking grows exponentially.
4. Personal liberty propagates worldwide.
5. Human dignity propagates worldwide.

Our real problems are not those listed above, but rather the increasing gaps between the advanced

societies and those who are left behind in the darkness of scientific and technological ignorance, in misconception and poverty. It is our responsibility as scientists to help closing these gaps.

An obvious trend in the world economy is a dramatic shift of wealth from the traditional West to East Asia. These trends reflect fundamental differences between Western and Eastern Heritage and culture, including social values, business culture, religious heritage and basic philosophy of life.

Since we live in artificial environments on products of human imagination and creativity, and since the human imagination and creativity have no limits, the effective area of planet Earth keeps expanding and our future seems brighter than ever.

References

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Prof. Keinan obtained his PhD in Chemistry from the Weizmann Institute of Science, Israel and conducted his postdoctoral research at the University of Wisconsin, USA. He was Dean of the Schulich Faculty of Chemistry, Technion - Israel Institute of Technology, Adjunct Professor at the Scripps Research Institute in California, founder and first Head of the Institute of Catalysis Science and Technology, Technion, Pro-Vice-Chancellor and Dean of Sciences, GTIIT, Guangdong, China, and a Distinguished Visiting Chair at the Academia Sinica, Taiwan. His research interests include biocatalysis with antibodies and synthetic enzymes, organic synthesis, molecular-computing, supra-molecular chemistry, improvised explosives, and drug discovery. He has published nearly 200 research papers, 22 patents, and four books and is the recipient of numerous awards having been recognized for academic excellence and scientific innovation. Prof. Keinan has served as Editor-in-Chief of the *Israel Journal of Chemistry* (Wiley-VCH) since 2009, President of the Israel Chemical Society since 2009, Member of the Executive Committee and Director of Communications at the Federation of Asian Chemical Societies (FACS), Editor-in-Chief of the *AsiaChem* magazine, founder and first Editor of the *ICE* magazine, member of the IUPAC Bureau (2016-2023), and member of IUPAC Evaluation Committee. He currently holds the Benno Gitter & Ilana Ben-Ami Professor of Chemistry at the Schulich Faculty of Chemistry, Technion - Israel Institute of Technology.