

Curriculum vitae

Dr. Ronen Bar-Ziv

Date of Birth: 4.8.1974, Israel.

Personal Status: Married + 3 children

Address: *Helmonit 4, Omer, Israel*

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Employment: Employed by Nuclear Research Centre Negev, as a senior chemist and the

Head of Inorganic Chemistry Lab.

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Academic Education:

1999-02 :B.Sc in Chemistry from Ben-Gurion Univ. of the Negev, Beer-Sheva, Israel

2004-06 : M.Sc in Chemistry from Ben-Gurion Univ. of the Negev, Beer-Sheva, Israel, under the supervision of Prof. Dan Meyerstein on the topic "*Study the Reactions of Alkyl Peroxyl Radicals with Surfaces immersed in Aqueous Solutions*"

2010-14 : Ph.D in Chemistry at Ben-Gurion Univ. of the Negev, Beer-Sheva, Israel. Ph.D thesis under the supervision of Prof. Dan Meyerstein on the topic : "*Reaction Mechanisms of Radicals with Nanoparticles (NPs) dispersed in Aqueous Solutions*"

2016-17 : Sabbatical leave - Visiting Scientist at the Dept. of Chemistry, Ben-Gurion University (collaboration with Prof. Maya Bar-Sadan)

Awards and Honors:

2012- Prize for excellence in doctoral research during the Ph.D studies from Chemistry Dep., Ben-Gurion University

2006- The Katzir scholarship to promising Israeli scientists specializing in fields of natural sciences and engineering.

2001- Certification of excellence for study achievements in B.Sc. studies in 2000. Chemistry Dept, Ben-Gurion University.

Research Grants:

2015: Fixation of Low Activity Radioactive Wastes by Coal Fly Ash/Nanoparticles and the study of Radiation Induced Processes at Surfaces (R. Bar-Ziv, T. Zidki, H. Cohen)- from The Israeli Atomic Energy Commission-**Pazi fund.**

2014: White City" project, US-IS Joint Research, "Test and Evaluation Plan for Radiological Decontamination Technologies (Ilan Yaar, R. Chakmon, Ronen Bar-Ziv-NRCN)-from the DOE/CTTSO-the Combating Terrorism Technical Support Office.

Research interests:

Topics of expertise-

1. Catalytic processes on nanoparticles
2. Photochemistry and radiolytically-induced process at the nanoscale and especially reaction mechanisms of radicals, hydrogen atoms and short-lived intermediates in heterogeneous systems (e.g. radical-NPs surfaces interactions)
3. Transition metal dichalcogenide (TMD) monolayers as catalysts and electro-catalysts for energy-related applications (Hydrogen evolution reaction, water splitting, CO₂ reduction)
4. the kinetics of redox (catalytic) reactions with metal surfaces including HER.
5. Radiation chemistry of aqueous solutions using the pulse radiolysis technique and steady state ⁶⁰Co-γ sources
6. Investigation of kinetics and mechanisms of reactions using spectrophotometric and electrochemical techniques
7. Product analysis using analytical tools such as: GC, Mass spectrometry, U.V-Vis spectroscopy, TEM, XPS and IR measurements
8. Coordination chemistry of transition metals and the catalytic activity of their complexes