

Curriculum Vitae

Name: Yoav Oved Rosenberg, PhD.
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Education

1993-1997- Kiriat Sharet high school, Holon, Israel. Majored in physics and mathematics. I matriculated with 98% in physics and 100% in mathematics.

2002-2006- Double degree in Life Sciences and Geology and Environmental Sciences at the Ben-Gurion University of the Negev, Israel.

Both degrees finished with *Summa Cum Laude*.

2007- 2009- M.Sc. at the department of Geology and Environmental Sciences, Ben-Gurion University of the Negev, Israel. Research topic: The Fate of Radium in the Concentrate of a Desalination Plant. Supervisor- Prof. Jiwchar Ganor. The degree was finished with *Summa Cum Laude*.

2008- 2012- PhD position in the combined M.Sc.-PhD program, at the department of Geology and Environmental Sciences, Ben-Gurion University of the Negev, Israel. Research topic: The Fate of Radium in Evaporitic Systems. Supervisor- Prof. Jiwchar Ganor.

Work Experience

Summer 2004 – Emma and Oscar Getz Summer Program, Weizmann Institute of Science, Israel. During this program I conducted a research project on the movement of contaminants, specifically heavy metals, through soil under the supervision of Professor Brian Berkowich.

2005- Laboratory assistant in the Geology and Environmental sciences department, BGU. I worked on Interferometry- a method to infer seismic movements, under the supervision of Dr. Alon Ziv.

2006 – Life Sciences research project on the determination of sex in cucumber. I worked under the supervision of Dr. Tova Trebitsh, Plant Molecular Genetics, Life Sciences Department, BGU.

2008 - 2009- Joint project with Israel's national water company- Mekorot. The aim of the project was to understand the cause of a blockage (scaling) in one of their desalination facility pipes. This project was done in the framework of my PhD and under the supervision of Prof. Jiwchar Ganor. As a result of the project the desalination plant maintained its full functionality (name of a referee with respect to this project can be given upon request).

2012 - present- Laboratory manager in Israel Energy Initiatives company (IEI). IEI is developing an environmentally acceptable approach to produce clean transportation fuels from oil shale utilizing its In-Situ conversion technology. For more information please visit <http://www.iei-energy.com/>.

Teaching Experience

2004 - 2009- Teaching in the Dean tutoring program, Ben-Gurion University.

2007 - present- teaching assistance in the department of Geology and Environmental Sciences, BGU. Courses which I was assigned to: a. Introduction to magmatic petrography lab (second year, undergraduate). b. Introduction to metamorphic petrography lab (second year, undergraduate). c. Geometrical crystallography (first year, undergraduate). d. Introduction to geochemistry (second year, undergraduate). e. Magmatic and metamorphic mapping (third year, undergraduate + graduate). f. Introduction to hydrogeology (second year, undergraduate).

2008- Geology research project supervision for high school students, Makif H, Beer Sheva. I supervised 22 high school students thorough their works, beginning with the theoretical background, field excursion and lab work as well as writing a report.

Computer Skills

Phreeqc- the USGS software for thermodynamic and kinetic calculations.

I used this program extensively throughout my M.Sc. and PhD research.

Publications

Ganor, J., Reznik, I. J., and Rosenberg, Y. O., 2009. Organics in water-rock interactions. In: Schott, J. and Oelkers, E. (Eds.), *Thermodynamics and Kinetics of Fluid-Rock Interaction*, Reviews in Mineralogy and Geochemistry, Vol. 70, 259-369.

Rosenberg, Y. O., Metz, V., and Ganor, J., 2011a. Co-precipitation of radium in high ionic strength systems: 1. Thermodynamic Properties of the Na-Ra-Cl-SO₄-H₂O System- Estimating Pitzer Parameters for RaCl₂. *Geochimica et Cosmochimica Acta* **75**, 5389-5402.

Rosenberg, Y. O., Metz, V., Oren, Y., Volkman, Y., and Ganor, J., 2011b. Coprecipitation of radium in high ionic strength systems: 2. Kinetic and ionic strength effects. *Geochimica et Cosmochimica Acta* **75**, 5403-5422.

Rosenberg, Y. O., Reznik, I. J., Zmora-Nahum, S., and Ganor, J. The effect of pH on the formation of a gypsum scale in the presence of a phosphonate antiscalant. *Dealination* (2011).

Rosenberg, Y. O., Metz, V., and Ganor, J., accepted. Radium Removal in a Large Scale Evaporitic System. *Geochimica et Cosmochimica Acta* **103**, 121-137.

Rosenberg, Y. O., Sadeh, Y., Metz, V., Carlos, M. P., and Ganor, J., submitted. Nucleation and growth kinetics of Ra_xBa_{1-x}SO₄ solid solution at NaCl concentration up to 5.9 m.

Grants

A research proposal which was based on the PhD research proposal was granted by the Israel Science Foundation (ISF, grant #511/09).

Awards and scholarships

2003- Entry Scholarship given to new students in the faculty for Natural Sciences, based on grades.

2004, 2005, 2006- Certificate of Distinction- Geology and Environmental Sciences.

2006- Certificate of Distinction- Life Sciences.

These certificates are awarded by the relevant departments to students for the previous year's academic achievements.

2006- "Machteshim" award for B.Sc. studies.

2008- "Machteshim" award for M.Sc. studies.

"Machtesim" is a prize for academic excellence in Geological and Earth Sciences awarded by the "Machteshim" industry for chemicals, Israel.

2008- JNF award for academic excellence in environmental sciences, M.Sc. studies.

2008- Water Authority of Israel scholarship award for M.Sc. studies.

2008- Kreitman school of advanced graduate studies scholarship award for PhD studies.

2009- Certificate of Distinction, M.Sc. studies- Geology and Environmental Sciences.

2009- Travel grant to the Goldschmidt 2009 conference granted by the conference committee.

2009- Rieger Foundation prize for Environmental Studies.

2010- Adams Fellowship Program, granted by the Israel Academy for Sciences and Humanities for PhD students.

2010- Best poster presentation in the international conference for Water-Rock Interaction The award was granted by the conference committee and by the International Association of Geochemistry and Cosmochemistry (IAGC).

2011- Geology and Environmental Sciences prize for the memory of Dr. Assaf Gur, granted for Ph.D. students by the department.

Presentations at international conferences and workshops

Rosenberg Y., Oren Y., Volkman Y., and Ganor J. (2008) Co-precipitation of Ra and Ba in Saline Solution. Kaplan workshop for environmental geochemistry, Mitzpe Ramon, Israel.

Rosenberg Y. O., Metz V., Oren Y., Vengosh A., Volkman Y. and Ganor J. (2009) Radium co-precipitation in evaporitic systems, in: 19th annual V. M. Goldschmidt conference, *Geochimica et Cosmochimica Acta* **73**. A1119, Davos, Switzerland.

- Y. O. Rosenberg, V. Metz, Y. Oren, A. Vengosh, Y. Volkman and J. Ganor (2010), Radium Co-Precipitation in Evaporitic Systems, in: *Ra – Rn 3rd international meeting*, pp. 53, Jerusalem, Israel.
- Rosenberg Y. O., Zmora-Nahum S. and Ganor J. (2010). The effect of pH on the formation of gypsum scale in the presence of phosphonate antiscalant, in: *Water Rock Interaction – 13 conference*, Guanajuato, Mexico, *CRC Press*, pp. 493-496.
- Rosenberg Y. O., Metz V. and Ganor J. (2011), The Co-precipitation of Ra in a large scale evaporitic system, in: 20th annual V. M. Goldschmidt conference, *Mineralogical Magazine*, **75** (3) p.1754, Prague, Check Republic.
- Rosenberg Y. O., Metz V. and Ganor J. (2011), Co-precipitation of radium in high ionic strength systems: 1. Thermodynamic Properties of the Na-Ra-Cl-SO₄-H₂O System- Estimating Pitzer Parameters for RaCl₂, ABC-Salt II Workshop (Actinide Brine Chemistry Workshop), Karlsruhe, Germany.
- Rosenberg Y. O., Metz V. and Ganor J. (2011), The Co-precipitation of Ra in a large scale evaporitic system, ABC-Salt II Workshop (Actinide Brine Chemistry Workshop), Karlsruhe, Germany.

Presentations at national conferences and workshops

- Rosenberg Y., Oren Y., Volkman Y., and Ganor J. (2008) The Fate of Radium in the Concentrate of a Desalinization Plant in Israel, in: *Geological Society of Israel Annual meeting*, pp. 82, Nazereth, Israel.
- Rosenberg Y. O., Metz V., Oren Y., Vengosh A., Volkman Y. and Ganor J. (2009) Radium co-precipitation in evaporitic systems, in: *Geological Society of Israel Annual meeting*, pp. 109, Kfar Blum, Israel.
- Rosenberg Y. O., Metz V., Oren Y., Vengosh A., Volkman Y. and Ganor J. (2009), The Fate of Radium in the Concentrate of a Desalinization Plant in Israel, in: *Israel Water Authority seminar*, pp. 87-94, Neve Ilan (in Hebrew).
- Rosenberg Y. O., Zmora-Nahum S. and Ganor J. (2010) The effect of pH on the Formation of Gypsum Scale in the Presence of Phosphonate Antiscalant, in: *Geological Society of Israel Annual meeting*, Eilat, Israel.
- Rosenberg Y. O., Zmora-Nahum S. and Ganor J. (2011) The effect of pH on the Formation of Gypsum Scale in the Presence of Phosphonate Antiscalant, in: *Geological Society of Israel Annual meeting*, Mizpe Ramon, Israel.

Rosenberg Y. O., Metz V. and Ganor J. (2011), Co-precipitation of Ra and Ba in the Evaporation Ponds of a Desalinization Plant, in: *Israel Water Authority seminar*, Ma'ale Hachamisha, (in Hebrew).