

Gilad Antler- CV

Department of Earth Sciences, University of Cambridge, Cambridge CB2 3EQ, UK

Email: ga307@cam.ac.uk

Website: <http://antlerg.weebly.com/>

Education:

2012-present: Ph.D at the Department of Earth Sciences, University of Cambridge.

Thesis topic: “*Isotope constrains on the biogeochemical sulfur cycle*”

Supervisors: Dr. Alexandra V. Turchyn and Dr. Orit Sivan.

2009-2011: M.Sc with honors at the Department of Geological and Environmental Sciences, Ben-Gurion University of the Negev.

Thesis topic: “*Multiple stable isotopes as a tool for studying the mechanism of bacterial sulfate reduction*”

Supervisors: Dr. Orit Sivan, Dr. Alexandra Turchyn and Prof. Barak Herut.

2006-2009: B.Sc with Honors at the Department of Geological and Environmental Sciences, Ben-Gurion University of the Negev.

Research project: “*Gypsum precipitation kinetics in Dead Sea brine - Seawater mixtures*”

Supervisor: Prof. Jiwchar Ganor

Publications:

(Abstract list at the end of the page)

Antler, G., Turchyn, A. V., Rennie, V., Herut, B., & Sivan, O. (2013). Coupled sulfur and oxygen isotope insight into bacterial sulfate reduction in the natural environment. *Geochimica et Cosmochimica Acta* 118, 98-117. doi: <http://dx.doi.org/10.1016/j.gca.2013.05.005>

Rubin-Blum, M., **Antler, G.**, Turchyn, A. V., Tsadok, R., Goodman-Tchernov, B. N., Shemesh, E., Austin, J. A., Coleman, D. F., Makovsky, Y., Sivan, O. and Tchernov, D. (2013). Hydrocarbon-related microbial processes in the deep sediments of the Eastern Mediterranean Levantine Basin. *FEMS Microbiology Ecology*. doi: 10.1111/1574-6941.12264

Anenburg, M., Bialik, O. M., Vapnik, Y., Chapman, H. J., **Antler, G.**, Katzir, Y., & Bickle, M. J. (2013) The origin of celestine–quartz–calcite geodes associated with a basaltic dyke, Makhtesh Ramon, Israel. *Geological Magazine*, 1-18. <http://dx.doi.org/10.1017/S0016756813000800>

Reznik, I. J., Gavrieli, I., **Antler, G.**, & Ganor, J. (2011). Kinetics of gypsum crystal growth from high ionic strength solutions: A case study of Dead Sea–seawater mixtures. *Geochimica et Cosmochimica Acta*, 75(8), 2187-2199. <http://dx.doi.org/10.1016/j.gca.2011.01.034>

Submitted

Antler G., Turchyn A.V., Herut B., Davies A., Rennie V. and Sivan O. Sulfur and Oxygen Isotope tracing of sulfate driven anaerobic methane oxidation in estuarine sediments. Submitted to *Estuarine, Coastal and Shelf Science*.

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Lazar B., Sivan O., Yechieli Y., Levi E., **Antler G.**, Gavrieli I., Stein M. Long-term freshening of the Dead Sea brine revealed by porewater Cl⁻ and $\delta^{18}O$ in ICDP Dead Sea deep-drill. Submitted to *Earth and Planetary Science Letters*.

Rubin M., **Antler G.**, Tsadok R., Shemesh E., Austin J., Coleman D.F., Goodman-Tchernov B., Tchernov D. First evidence for large-scale zeta-proteobacterial biofilm presence at the Levantine continental margins. Submitted to *PLOS ONE*.

Knossow N., Blonder B., Eckert W., Turchyn A.V., **Antler G.**, Kamyshny Jr A. Annual sulfur cycle in a warm monomictic lake with sub-millimolar sulfate concentrations. Submitted to *Geochemical Transactions*

Scholastic achievement awards:

2012- Cambridge International Scholarship Scheme (3 years).

2011- Excellent award on the behalf of Yosi Levi

2009-2011: M.Sc. scholarship, the Geological & Environmental Dpt., BGU.

2007: Certificate of Distinction- Department of Geological and Environmental Sciences.

2007: Excellence award from Makhteshim-Agam LTD.

Work Experience

2012-present- Teaching assistant at University of Cambridge: Demonstrating part 2 and part 3 courses.

2009-2011: Teaching assistant at Ben Gurion University: Chemical Oceanography, Introduction to Environmental Oceanography, Mineralogy and Proxies for Paleoclimate and Paleoceanography

2007-2009: Research assistant for Prof. Jiwchar Ganor- Analytical laboratory of rock-water interaction.

2006- 2007: Fortress Applications LTD- Assembling electronic components.

Other:

2010 (November- December): Volunteer work for the Dead Sea Deep Drilling Project (ICDP- Dead Sea).

2011 (November): Participant in the "Nautilus" expedition as a member of the Israeli scientific crew: shifts in the control room, pore-water sampling and processing of the samples.

2007-2011: Research voyage at Lake Kinneret, the Dead Sea, the Red Sea and the Mediterranean.

Spring and Summer school:

2011 (march): FIMIN (The Functionality of Iron Minerals in Environmental Processes) Spring School: Iron in the Environment- From Nature to the Laboratory.

2008 (September): Participant in the summer program for selected students in Chemistry held at the Weizmann Institute of Science.

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Conferences and talks:

2013:

Jennifer V. Mills, Antler, G., Turchyn, A.V., Carbon cycling in estuaries and marginal marine environment, MMEG Meeting 2013, UNITED KINGDOM, Essex.

Antler, G., Turchyn, A.V., Rennie, V., Herut, B., Sivan, O., Coupled sulfur and oxygen isotope insight into bacterial sulfate reduction in the natural environment, PRMES 2013, UNITED KINGDOM, Southampton.

Jennifer V. Mills, Antler, G., Turchyn, A.V., Carbon cycling in estuaries and marginal marine environment, PRMES 2013, UNITED KINGDOM, Southampton.

Antler G., Unique isotopic fingerprint during anaerobic oxidation of methane, Isotope Coffee: Geochemistry and Petrology Seminars Department of Earth Sciences series, University of Cambridge.

Antler G., Turchyn A.V., Herut B., Davies A., Adler M., Rennie V., and Sivan O., Sulfate-Oxygen Isotope Insight into Anaerobic Methane Oxidation in Estuarine Sediments, CIESM 2013, FRANCE, Marseille.

Antler G., Turchyn A.V., Davies A., Adler M., Rennie V., Herut B. and Sivan O., Sulfate-Oxygen Isotope Insight into Anaerobic Methane Oxidation in Estuarine Sediments, Goldschmidt 2013, ITALY, Florence.

Avrahamov N, Antler G., Yechieli Y, Gavrieli I, Joye S & Sivan O., Anaerobic Oxidation of Methane by Sulfate in Hypersaline Groundwater at the Dead Sea Aquifer, Goldschmidt 2013, ITALY, Florence.

Lazar B, Sivan O, Antler G., Yechieli Y, Levi E, Gavrieli I & Stein M., Substantial Changes in the Salinity and Paleo-Hydrology of the Late Quaternary Dead Sea Revealed in the ICDP Deep Drill, Goldschmidt 2013, ITALY, Florence.

Antler G., Bosak T., Ono S., Sivan O., and Turchyn A.V., Combined S-33 and O-18 Isotope Tracing of Intracellular Sulfur Metabolism during Microbial Sulfate Reduction, Boston Bacterial Meeting 2013, USA, Cambridge.

Antler G., Turchyn A.V., Davies A., Adler M., Rennie V., Herut B. and Sivan O., Sulfate-oxygen isotope insight into anaerobic methane oxidation in estuarine sediments, IAAS Annual Meeting 2013, ISRAEL, Mikhmoret.

2012:

Antler G., Turchyn A.V., Davies A., Adler M., Rennie V., Herut B. and Sivan O., Sulfate-oxygen isotope insight into anaerobic methane oxidation in estuarine sediments, AGU 2012, USA, San-Francisco.

Antler, G., Turchyn, A.V., Rennie, V., Herut, B., Sivan, O., Coupled sulfur and oxygen isotope insight into bacterial sulfate reduction in the natural environment, UK- ICDP main conference 2012, UNITED KINGDOM, Oxford;

Antler, G., Turchyn, A.V., Rennie, V., Herut, B., Sivan, O. Coupled sulfur and oxygen isotope insight into bacterial sulfate reduction in the natural environment, UK- ICDP student conference 2012, UNITED KINGDOM, Chicheley Hall;

Antler, G., Turchyn, A.V., Rennie, V., Herut, B., Sivan, O., Investigating the mechanism of anaerobic

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methane oxidation in estuarine sediments, IAAS Annual Meeting 2012, ISRAEL, Kinneret;

Antler, G., Turchyn, A.V., Rennie, V., Herut, B., Sivan, O. Coupled sulfur and oxygen isotope insight into bacterial sulfate reduction in the natural environment, IAAS Annual Meeting 2012, ISRAEL, Kinneret;

Makovsky Y., Ben Avraham Z., Ballard R.D., Austin J., Coleman D., Almogi-Labin A., Tchernov D., Tezcan D., Spiro B., Ezra O., Antler G., Rubin M., Tsadok R., Fuller S.A., Phillips B., Qupty N., Sade H., David N., Scheinin A., Sivan O., Hübscher C., and Project Nautilus participants. Pervasive evidence of methane seepage along the base of Israel's Mediterranean slope – preliminary results of E/V Nautilus 2011 cruise. IAAS Annual Meeting 2012, ISRAEL, Kinneret;

Makovsky Y., Ben Avraham Z., Ballard R.D., Austin J., Coleman D., Almogi-Labin A., Tchernov D., Tezcan D., Spiro B., Ezra O., Antler G., Rubin M., Tsadok R., Fuller S.A., Phillips B., Qupty N., Sade H., David N., Scheinin A., Sivan O., Hübscher C., and Project Nautilus participants. Pervasive evidence of methane seepage along the base of Israel's Mediterranean slope – preliminary results of E/V Nautilus 2011 cruise. GSI Annual Meeting 2012, ISRAEL, Ashqelon.

Antler G., Coupled sulfur and oxygen isotope insight into bacterial sulfate reduction in the natural environment, Isotope Coffee: Geochemistry and Petrology Seminars Department of Earth Sciences series, University of Cambridge.

Antler, G., Turchyn, A.V., Rennie, V., Herut, B., Sivan, O., Coupled sulfur and oxygen isotope insight into bacterial sulfate reduction in the natural environment, EMBO Workshop 2012, THE NEDERLANDS;

2011:

Antler, G., Turchyn, A.V., Rennie, V., Herut, B., Sivan, O., Coupled sulfur and oxygen isotope insight into bacterial sulfate reduction in the natural environment, Goldschmidt 2011, CZECH REPUBLIC; Prague.

Antler, G., Turchyn, A.V., Herut, B., Sivan, O., The dynamics of sulfate reduction as deduced from data of sulfate isotopes in pore fluids and their subsequent modeling, 2011: FIMIN Spring School, 2011, SPAIN, Córdoba,

Antler, G., Turchyn, A.V., Rennie, V., Herut, B., Sivan, O., The dynamics of sulfate reduction as deduced from data of sulfate isotopes in pore fluids and their subsequent modeling, GSI Annual Meeting, 2011, ISRAEL, Mitzpe Ramon.

Antler, G., Turchyn, A.V., Herut, B., Sivan, O., The dynamics of sulfate reduction as deduced from data of sulfate isotopes in pore fluids and their subsequent modeling, I.A.W.R annual Meeting, 2011, ISRAEL, Dead-Sea.

2009:

Reznik IJ, Antler G., Ganor J & Ittai G Gypsum Precipitation Kinetics in Dead Sea Brine – Seawater Mixtures, Goldschmidt 2009