

YAIR ROSENTHAL- Curriculum Vita

Institute of Marine and Coastal Science,
and Department of Geology
Rutgers The State University of New Jersey
71 Dudley Rd, New Brunswick, NJ 08901-8521, USA
phone: (732) 932-6555 ext. 250; fax: (732) 932-8578
Email: rosentha@imcs.rutgers.edu
<http://marine.rutgers.edu/faculty/rosentha/rosenthal.html>

Professional experience

2003- Associate professor, IMCS and Department of Geology *Rutgers University*
2000-2003 Assistant professor, IMCS and Department of Geology *Rutgers University*
1997-2000 Assistant research professor, Institute of Marine and Coastal Sciences (IMCS),
Rutgers University
1996-1997 Post-doctoral fellow, *The Weizmann Institute of Science, Israel*
1995-1996 Post-doctoral investigator, *Biosphere-2 Center of Columbia University, Tucson AZ*
1988-1994 Graduate student, research assistant, post-doc, *Massachusetts Institute of Technology*
1985-1988 Graduate student, RA and TA, *The Hebrew University of Jerusalem, Israel*
1981-1982 Field geologist for the Society for the Protection of Nature, Israel
1978-1981 Regional supervisor for the Nature Reserves Authority, Israel

Education

1994 **Ph.D.** Massachusetts Institute of Technology / Woods Hole Oceanographic Institution
1988 **M.Sc.** The Hebrew University of Jerusalem, Israel
1985 **B.Sc.** The Hebrew University of Jerusalem, Israel, majors in Geology and Biology

Research interests

Trace metal biogeochemistry; Paleoceanography; Oceanic and terrestrial controls on the global carbon cycle; Metal pollution in estuarine and coastal sediments

Shipboard experience

2004 R/V KNORR. Co-chief Scientist. Coring in western N. Atlantic (21 days)
2004 R/V KNORR, Chief Scientist. Coring in Norwegian Sea (10 days)
2003 R/V Baruna Jaya VIII, Chief Scientist. Coring in Indonesia (31 days)
2002 R/V Oceanus, coring in the North Atlantic (4 days)
2000 02 Eight 1-day cruise on the Hudson River
1998 R/V Moana Wave, Co-chief, Coring in Hawaii (23 days)
1997 Shikmona, Sediment geochemistry, eastern Mediterranean Sea
1992 Le Suirat, Coring in the North Atlantic (21 days)
1991 R/V New Horizon, Trace-metal cycling in the California Current (11 days)
1990 R/V New Horizon, Trace-metal cycling in the California Current (11 days)
1989 R/V Weatherbird, Trace-metal cycling near Bermuda (2 days)

Teaching

- CHEMICAL OCEANOGRAPHY (Graduate course), Fall 2000, 2001, 2002, 2003
- PALEOCEANOGRAPHY (Graduate course), Fall 2001
- THE WATER PLANET (Undergraduate course), Spring 2001, 2002, 2003
- PROBLEMS IN MARINE SCIENCES (Undergraduate course), Fall 2000, Spring 2001
- INTRODUCTION TO MARINE SCIENCES (Undergraduate course), Fall 2001, FALL 2002

Awards

Forchheimer Fellowship, for visiting scientists at the Hebrew University, 2005
The Dept. of Geology (Hebrew University) Excellence Award for graduate students, 1986
The Israel Geological Society Award for M.Sc. thesis, 1987

Professional affiliations

Geochemical Society, American Geophysical Union

Graduate students supervised

2002- Ph.D.- Sindia Sosodian, current Ph.D. student (principal advisor)
2004- Ph.D.- Kate Jordan, current Ph.D. student (principal advisor)

Previous post-doctoral advisees

Dr. Thibault de Garidel (Ph.D. CEREGE, France; starting 9/05 researcher at CNRS, France)
Dr. Bas Vandeschootbrugge (Université de Neuchâtel; current position- Assit Res. Prof. U. Farnkfurt)
Dr. Carrie Lear (Ph.D. Cambridge U.; current position- lecturer Cardiff U. UK)
Dr. Trevor Bailey (Ph.D. Royal Holloway U., current position- Cardiff Geological Museum)
Dr. Dyke Andreasen (Ph.D. UCSC; current position Research Scientist UCSC)

Undergraduate advising

Advised over 25 undergraduate students in laboratory work including 3 honor thesis projects

Academic and professional services

- Fellow of Livingston College, Rutgers University
- Reviewer for *Science*, *Nature*, *Paleoceanography*, *Geochim. Cosmochim. Acta*, *Marine Geology*, *Earth Planet. Sci. Lett*, *Geology*, *Palaeogeogr. Palaeoclimatol. Palaeoecol*, *Global Planetary Change*, *Quaternary Research*, *Quaternary Science Reviews*, *Chemical Geology*, *Geophys. Geochem. Geosy.*, *Marine Micropaleontology* and other journals
- Reviewed proposals for NSF Marine Geology, Earth System History, Chemical Oceanography, Office of Polar and Atmospheric Science programs; ACS Petroleum Research Fund; Hudson River Foundation; Israel-USA Bi-national Science Foundation; European Science Foundation; National Environmental Research Council
- A member of the reviewing committee for EPSL-On Line (1996)
- Session Chair Fall AGU 1998, Spring AGU 1999, Fall AGU 2001
- AGU, Spring 1999 member of the media advisory
- NSF proposal review panelist: Marine Geology and Geophysics, November 2000
- NSF proposal review panelist: Marine Geology and Geophysics, May 2001
- Consultant to the New York Academy of Sciences, 2002
- Faculty sponsor for Randy Rutberg as part of NSF-funded Hunter College's "Gender Equity Project"
- Organizer of an international Mg/Ca inter-lab calibration study
- Guest editor for special issue of *Global Planetary Change* on "High-Resolution Paleoclimatology in the western Pacific during late Quaternary"

Invited conference and workshop talks (since 1996)

- 13th International Marine Science Symposium on the Physical, Biological, Chemical and Geological Processes in the Pacific Ocean and Asian Marginal Seas. July 2005 Bali, Indonesia. Invited speaker
- Israel Society for Ecology and Environmental Quality Sciences. The Weizmann Institute of Science, Israel, June 2005. Invited speaker

- The G.M. Friedman Seminar on Paleoclimate and Paleoceanography, May 2005. The Hebrew University of Jerusalem, Israel. Invited speaker
- Past Equatorial Pacific Dynamics meeting, April 2005 Taipei, Taiwan, Invited speaker
- International Conference in Paleoceanography, France Sept. 2004 Invited speaker (declined)
- Goldschmidt Conference in Geochemistry Kurashiki Japan, 2003 (Keynote lecture)
- Goldschmidt Conference in Geochemistry Davos Switzerland (2 invited talks), 2002
- NOAA workshop on marine CaCO₃ cycle in the ocean, LDEO October 2002
- American Geophysical Union Fall Meeting, San Francisco, 2001
- New Academy of Science – “Mercury and cadmium cycling in the NY/NJ Harbor”, Oct. 2002
- New Academy of Science – “Mercury and cadmium cycling in the NY/NJ Harbor”, June 2002
- NY/NJ Harbor Estuary meeting on "Who is doing what in the Hudson River?" January 2002
- Organizer and convenor of AGU session, "Amplitude and phasing of tropical temperature signals during glacial cycles", Fall 2001
- International Conference of Paleoceanography VII, Sapporo Japan (cancelled due to the September 11 terrorist attack)
- Participant of the workshop on “The Ocean Carbon Cycle and Climate change”, Delmenhorst, Germany 2001
- Participant in JGOFS “Synthesis and modeling meeting on calcification”. WHOI May 2001
- IGBP sponsored workshop on “The global carbon and nutrient cycles”, Stockholm, Sweden 1999
- Speaker at the workshop on "CaCO₃ dissolution in the deep ocean", LDEO August 1999
- Participant of the NSF sponsored workshop on “Alkenone-based paleoceanographic indicators”, WHOI, USA 1999
- Gordon Research Conference of Chemical Oceanography “Mg-paleothermometry” USA 1999
- EPILOG workshop on “Global ocean and land surface temperatures during the LGM”, Delmenhorst, Germany 1999
- American Geophysical Union Spring Meeting, Boston, 1999
- American Geophysical Union Fall Meeting, San Francisco, 1998
- Participant in Marine Isotope Stage 11 Interest Group, San Francisco, Dec 1998
- NASA- workshop on “Climate-vegetation bi-directional interactions”, São Paulo, Brazil 1996

FUNDING HISTORY

NSF (OCE)- *Reconstructing Holocene climate variability and the Indonesian throughflow in the western equatorial Pacific* (\$623,585 06/05-06/08 PI: Rosenthal \$164,606 share; co-PI’s: Oppo, WHOI and Linsley, SUNYA).

NSF (MRI)- *Acquisition of a laser ablation high resolution inductively coupled plasma mass spectrometer* (\$645,000 09/04-08/07 PI’s: Sherrell, Rosenthal, Field, Swisher).

NSF (OCE)- *Assessing the effects of calcite saturation on the benthic foraminiferal Mg/Ca-temperature relationship using a homothermal depth transect in the Norwegian Sea* (\$221,810 02/04-01/06 PI: Rosenthal). Includes a 10-day cruise in the Norwegian Sea Supplement (\$36,900)- for participation on 25 day cruise to New Zealand

NSF (OCE)- *Acquisition of inductively coupled plasma optical emission spectrometer (ICP OES) for paleoceanographic research* (\$66,400 01/03-01/04 PI: Rosenthal)

NSF (OCE)- *Reconstructing Holocene climate variability and the Indonesian throughflow in the western equatorial Pacific* (\$850,000 08/02-08/04 PI: Rosenthal \$365,912 share; co-PI’s: Oppo, WHOI and Linsley, SUNYA).
Supplement: (\$18,660)

NSF (sub-award through WHOI)- *Holocene changes in the Gulf Stream and western Sargasso Sea* (\$600,000 9/02-9/05 PI: Keigwin, WHOI; co-PI: Rosenthal - \$75,000 share)

NSF (EAR)- *Constraining Tertiary temperatures, salinities, and ocean chemistry: An isotopic and trace-metal study of serially-sampled mollusks.* (\$112,000 01/02-12/03 PI: Ethan Grossmann, TAMU; co-PI: Rosenthal, Lear - \$53,980 share)

NSF (OCE)- *An inter-lab comparison of Mg/Ca and Sr/Ca measurements in foraminifera* (\$22,765 03/01-03/02; PI: Rosenthal)

Rutgers Research Council (2002) - \$1000

Rutgers Undergraduate Research Fellows Program (2001) - \$1500

NSF (Biocomplexity)- *The evolution and radiation of eucaryotic phytoplankton taxa* (\$4,000,000 10/00-10/05 PI: Paul Falkowski; co-PI: Rosenthal - 10% share)

Hudson River Foundation- *Toxic metal inputs to the lower Hudson River Estuary during sediment resuspension* (\$224,496 6/00-6/02 PI: Rosenthal - 65% share; co-PI's: Rob Sherrell, Rutgers and Rob Mason, CBL Maryland)

NSF (OCE)- *Incorporation and preservation of magnesium in planktonic foraminiferal calcites: Implications for Mg-paleothermometry* (\$349,000 5/00-5/03 PI: Rosenthal; co-PI: G. Lohmann, WHOI - Rosenthal \$179,000 share)

NSF (OCE)- *Research Experience for Undergraduate* (\$5875; 4/00-4/01; PI: Rosenthal)

NSF (OCE)- *The Southern Ocean paleochemical record: Modern calibration and down-core reconstructions of trace-metal variability in planktonic and benthic foraminifera* (\$214,038 1/99-1/02; PI: Rosenthal)

NSF (OCE)- *A calibration study of the elemental chemistry of live benthic foraminifera at Hawaii* - (\$29,864 5/98-5/99; PI: Rosenthal)

PUBLICATION LIST

(*Italic marks a student or post-doc paper; note: pdf versions are available from my website*)

- Andreasen, H.D., Sosdian, S., Perron-Cashman, S., Lear C.H., deGaridel-Thoron, T., Field H.M. and **Y. Rosenthal**, Fidelity of ICP-OES and ICP-MS measurement of Mg/Ca and Sr/Ca ratios in marine biogenic carbonates: Are they trustworthy together? *Submitted to Geochem. Geophys. Geosy.* (7/20/2005)
- de Garidel-Thoron, T., **Rosenthal, Y.**, Beaufort, L., Bard E., and A., Mix, A multiproxy assessment of the equatorial Pacific hydrography during the last deglaciation. *Submitted to Geochem. Geophys. Geosy. In submission to Geochem. Geophys. Geosy.* (7/20/2005)
- Lear, C.H. and **Y. Rosenthal**, Cenozoic Carbonate Saturation and Climate Variability: Insights from foraminiferal Li/Ca. *In review Geology*
- Rosenthal, Y.**, Lear, C.H., Oppo, D.W. and B. Linsley, Temperature and Carbonate Ion Effects on Mg/Ca and Sr/Ca Ratios in Benthic Foraminifera: The Aragonitic Species *Hoeglundina elegans*. *In press Paleoceanography*.
- van de Schootbrugge, B., Tremolada, F. **Rosenthal, Y.**, Bailey, T. R., Feist-Burkhardt, S., Brinkhuis, H. Pross, J. Kent, D.V. and P.G. Falkowski, End-Triassic calcification crisis and blooms of organic-walled “disaster species” *Accepted with revisions to Palaeogeogr. Palaeoclimatol. Palaeoecol.*
- Rosenthal, Y.**, de Garidel-Thoron, T. and L., Beaufort, Late Quaternary paleoceanography of the northwestern Pacific: Results from IMAGES program, accepted to *Global Planetary Change*
- van de Schootbrugge, B., McArthur, J.M., Bailey, T.R., **Rosenthal, Y.**, Wright, J.D., and K.G., Miller, The Toarcian oceanic anoxic event (T-OAE): an assessment of global causes using belemnite C-isotope records. *Paleoceanography* 20(2) 14 pages doi:10.1029/2004PA001102
- Keigwin, L. D., Sachs, J., **Rosenthal, Y.**, and E. A. Boyle, (2005) The 8200 year B.P. event in the slope water system, western subpolar North Atlantic. *Paleoceanography* 20(2) 14 pages doi:10.1029/2004PA001074
- de Garidel, T., **Rosenthal, Y.**, Bassinot, F., and L., Beaufort, (2005) Stable sea surface temperatures in the western Pacific warm pool over the past 1.75 million years. *Nature* 433: 294-298
- Van de Schootbrugge B., Bailey T.R., Katz M.E., Wright J.D., **Rosenthal Y.**, Feist-Burkhardt S., and P.G., Falkowski, (2005) Early Jurassic climate change and the radiation of organic walled phytoplankton in the Tethys Sea. *Paleobiology* 31(1): 73-97
- Lear, C.H., **Rosenthal, Y.**, Coxall, H.K., and P.A. Wilson, (2004). Late Eocene to early Miocene ice sheet dynamics and the global carbon cycle. *Paleoceanography* 19: 11 pp. doi:10.1029/2004PA001039
- Rosenthal Y.** and A. Broccoli, (2004). In search of Paleo-ENSO. *Science* 304:219-221
- Rosenthal Y.**, S. Perron-Cashman, Lear C.H. et al., (2004). Laboratory inter-comparison study of Mg/Ca and Sr/Ca measurements in planktonic foraminifera for paleoceanographic research. *Geochem. Geophys. Geosy.* Vol. 5. doi:10.1029/2003GC000650
- Quigg, A., Finkel, Z.V., Irwin, A.J., **Rosenthal, Y.**, Ho, T-Y. Reinfelder, J.R., Schofield, O., Morel, F.M.M. and P.G., Falkowski, (2003), The evolutionary inheritance of elemental stoichiometry in marine phytoplankton. *Nature* 425:291-294
- Bailey T.R., **Rosenthal, Y.**, McArthur, J.M., van de Schootbrugge, B. and M.F., Thirlwall, (2003) Paleoclimatographic changes of the Late Pliensbachian - Early Toarcian interval: a possible link to the genesis of an Oceanic Anoxic Event. *Earth Planet. Sci. Lett.* 212: 307-320
- Lear C.H., **Rosenthal, Y.**, and J.D. Wright, (2003). The closing of a seaway: Ocean water masses and global climate change. *Earth Planet. Sci. Lett.* 210: 425-436
- Keigwin, L.D., Sachs J. P. and **Y. Rosenthal**, (2003). A 1600-year History of the Labrador Current off Nova Scotia. *Climate Dynamics*, doi 10.1007/s382-003-0316-6

- Rosenthal, Y.**, Oppo, D.W., and B.K., Linsley. (2003). The amplitude and phasing of climate change during the last deglaciation in the Sulu Sea, western equatorial Pacific. *Geophys. Res. Lett.* 30(8), 1428 doi: 10.1029/2002GL016612
- Dannenmann, S., Linsley, B.K., Oppo, D.W., **Rosenthal, Y.**, and L. Beaufort, (2003). East Asian Monsoon Forcing of Suborbital variability in the Sulu Sea during Marine Isotope Stage 3: Link to Northern Hemisphere Climate. *Geochem. Geophys. Geosy. Vol 4.* doi: 10.1029/2002GC000390
- Oppo, D.W., Linsley, B.K., **Rosenthal, Y.**, Dannenmann, S., and L. Beaufort, (2003). Orbital and suborbital climate changes in the western tropical Pacific. *Geochem. Geophys. Geosy. Vol 4.* doi: 10.1029/2002GC000260
- Rosenthal, Y.** and G.P., Lohmann, (2002). Accurate estimation of sea surface temperatures using dissolution-corrected calibration for Mg/Ca paleothermometry. *Paleoceanography* 17: doi: 10.1029/2001PA000749
- Lear, C.H., **Rosenthal, Y.** and N. Slowey, (2002). Benthic foraminiferal Mg/Ca-paleothermometry: A revised core-top calibration. *Geochim. Cosmochim. Acta* 66: 3375-3387.
- Martin, P.A., Lea, D.W., **Rosenthal, Y.**, Papenfuss, T.P. and M. Sarnthein, (2002). Late Quaternary Deep-Sea Temperatures Inferred From Benthic Foraminiferal Magnesium. *Earth Planet. Sci. Lett.* 198:193-209
- Stoll, H., **Rosenthal, Y.** and P.G. Falkowski, (2002). Calibration of coccolith climate proxies: Discerning kinetic and biological effects on Sr/Ca of coccoliths of *Emiliania huxleyi* from continuous culture. *Geochim. Cosmochim. Acta* 66: 927-936
- Cullen, J.T., **Rosenthal, Y.** and P.G. Falkowski, (2001). The effect of anthropogenic CO₂ on the carbon isotope composition of marine phytoplankton *Limnol. Oceanogr.* 46: 996-998.
- Stoll, H.M., Encinar J.R., Garcia Alonso, J.I., **Rosenthal Y.**, Probert I. and C. Klaas, (2001) A first look at paleotemperature prospects from Mg in coccolith carbonate: cleaning techniques and culture measurements. *Geochem. Geophys. Geosy.* doi:2000GC000144
- Falkowski, P.G. and **Y. Rosenthal**, (2001). Biological diversity and resource plunder in the geological record: Casual correlations or causal relationships? *Proc. Nat. Acad. Sci.* 98:4290-4292
- Mix, A.C., Bard, E., Eglinton, G., Keigwin, L., Ravelo, A.C. and **Y. Rosenthal**, (2000). Multi-proxy strategies in paleoceanographic studies. *Geochem. Geophys. Geosy.* doi:2000GC000056
- IGBP Working Group on Carbon and Nutrients**, (2000). Towards an integrated view of the control of the biosphere. *Science* 290:291-296
- Rosenthal, Y.**, Dahan, M. and A. Shemesh, (2000). Southern Ocean contributions to glacial-interglacial changes of atmospheric pCO₂: an assessment of carbon isotope records in diatoms. *Paleoceanography*, 15: 65-75.
- Rosenthal, Y.**, Lohmann, G.P., Lohmann, K.C. and R.M. Sherrell, (2000). Incorporation and preservation of Mg in *G. sacculifer*: Implications for reconstructing sea surface temperatures and the oxygen isotopic composition of seawater. *Paleoceanography*, 15: 135-145.
- Rosenthal, Y.**, Field, P. and R. Sherrell, (1999). Precise determination of element/calcium ratios in calcareous samples using sector field inductively coupled plasma mass spectrometry. *Analytical Chemistry*, 71: 3248-3253
- Rosenthal, Y.**, Farnsworth, B., Romo, F.V.R., Guanghui, L., and D.V.B. Marino, (1999). High quality, continuous measurements of CO₂ in Biosphere 2 to assess whole mesocosm carbon cycling. *Ecological Engineering* 13: 249-262.
- Rosenthal, Y.**, (1998). Variations of ecosystem gas exchange in the rain forest mesocosm at Biosphere 2 in response to elevated CO₂. *Global Change Biology* 4: 539-548.

- Rosenthal, Y.,** Boyle, E. A. and N. Slowey, (1997). Temperature control on the incorporation of Mg, Sr, F and Cd into benthic foraminiferal shells from Little Bahama Bank: prospects for thermocline paleoceanography. *Geochim. Cosmochim. Acta.* 61: 3633-3643.
- Rosenthal, Y.,** Boyle, E. A. and L. Labeyrie, (1997). Deepwater circulation in the Southern Ocean during the last glacial maximum: evidence from foraminiferal cadmium. *Paleoceanography*, 12: 778-787.
- Boyle, E.A., and **Y. Rosenthal**, (1996). Chemical hydrography of the South Atlantic during the last glacial maximum: $\delta^{13}\text{C}$ vs. Cd. In: Springer-Verlag, Berlin. The South Atlantic: Present and Past Circulation, Eds. G. Wefer, et al., Berlin. pp. 423-443.
- Rosenthal, Y.,** Boyle, E. A., Labeyrie, L., and D. Oppo, (1995). Glacial enrichments of authigenic Cd and U in Subantarctic sediments: A climatic control on the elements' oceanic budget? *Paleoceanography*, 10: 395-413.
- Rosenthal, Y.,** Lam, P., Boyle, E. A., and J. Thomson, (1995). Authigenic cadmium enrichments in suboxic sediments: Precipitation and postdepositional remobilization. *Earth and Planet. Sci. Lett.* 132: 99-111.
- Oppo, D. and **Y. Rosenthal**, (1994). Cd/Ca changes in a deep Cape Basin core over the past 730,000 years: Response of circumpolar deepwater variability to Northern Hemisphere ice sheet melting? *Paleoceanography* 9: 661-675.
- Rosenthal, Y.,** and E. A. Boyle, (1993). Factors controlling the fluoride content of planktonic foraminifera: An evaluation of its paleoceanographic applicability. *Geochim. Cosmochim. Acta* 57: 335-346.
- Rosenthal, Y.** and A. Katz, (1989). The applicability of trace elements in freshwater shells for paleogeochemical studies. *Chem. Geol.* 78: 65-76.
- Rosenthal, Y.,** Katz, A., and E. Tchernov, (1989). The reconstruction of Quaternary freshwater lakes from the chemical and isotopic composition of gastropod shells: The Dead Sea, Israel. *Palaeogeogr. Palaeoclimatol. Palaeoecol.* 74: 241-253.

IN PREPARATION

- van de Schootbrugge, B.,* Rosenthal, Y., Bailey, T. R., McArthur, J.M., Chistensen W.K., Wright, J.D., and K.G., Miller,, Late Cretaceous climate change and paleoceanographic reorganization in the North Atlantic
- Sosdian, S.,* Gentry, K., Grossman, E L., Lear, C., and **Y. Rosenthal**, Temperature and growth rate effects on Sr/Ca variability in the marine gastropod *Conus sp.*: Assessing its paleoceanographic utility. *To be submitted to Geophys. Geochem. Geosy*
- Rosenthal Y.** Elemental proxies in biogenic carbonates. A chapter in: Methods in the Late Cenozoic Paleooceanography. Edited by Anne de Vernal and Claude Hillaire-Marcel.
- de Garidel, T.,* and **Y. Rosenthal**, Early Pleistocene climate. A chapter in: Elsevier Encyclopedia of Quaternary Sciences.
- Rosenthal Y.,** Reconstructing ocean paleotemperatures from elemental ratios in biogenic carbonates. A chapter in: Elsevier Encyclopedia of Quaternary Sciences.
- Gentry, K., *Sosdian, S.,* Grossman, E L., Lear, C., and **Y. Rosenthal**, Evaluating Seasonal Isotope and Trace-Metal Profiles of Serially-Sampled *Conus sp.* Gastropods: Proxies for Paleoenvironmental Change and Paleoecology
- Rosenthal, Y.,** Lear, C.H., Oppo, D.W., and B. Linsley, Temperature and carbonate ion effects on Mg/Ca ratios in calcitic benthic foraminifera: *Cibicidoides sp.* *To be submitted to Paleoceanography.*
- de Garidel, T.,* **Rosenthal, Y.,** and L. Beaufort, Evidence for Large Climate Variability during the Holocene from the Western equatorial Pacific.
- Field M.P., **Rosenthal, Y.,** Perron-Cashman, S., Chant, R., and R. Sherrell, The effect of tidal driven

resuspension on pollutant metals in the Hudson River estuary
Field M.P., R. Sherrell, Perron-Cashman, S., and **Y., Rosenthal**, The behavior of pollutant metals in the Hudson River estuary
Tchernov, D., Rosenthal, Y., Irwin, A., Ravello, C.A. and P.G. Falkowski, Isotopic fractionation of carbon in the the coccolithophorid, *Emeliana huxleyi*. *To be submitted to Limnol. Ocean.*

Theses

Rosenthal, Y., (1994). Late Quaternary Paleochemistry of the Southern Ocean: Evidence from Cadmium Variability in Foraminifera and Sediments. Ph.D. thesis. MIT / WHOI Joint Program in Oceanography, (Thesis advisor: Prof. Ed Boyle)
Rosenthal, Y., (1988). Evidence from gastropod shells for the evolution of freshwater lakes in the Jordan Valley, Israel. M.Sc. thesis. The Hebrew University of Jerusalem - in Hebrew. (Thesis advisors: Profs. Amitai Katz and Eitan Tchernov)

Non peer-reviewed reports

Boehme, S.E., Panero, M., **Rosenthal, Y.**, and V. Thomas, (2003). Pollution prevention and management strategies for cadmium in the NY/NJ Harbor watershed. Report to the New York Academy of Sciences. 35 p.
Rosenthal Y. and S. Perron-Cashman. (2002). Cadmium Cycling in the Hudson/Raritan River Basin. Report to the New York Academy of Sciences. 16 p.
Rosenthal, Y., (1995). Hydrogeology and ecology of desert springs in the Arava Valley, Israel. Nature Reserve Authority, Jerusalem, 85 p. (in Hebrew).
Rosenthal, Y., 1982. An environmental survey of Dimona Region (Israel): An assessment for urban development. Society for the Protection of Nature 50 p. (in Hebrew)

INVITED ABSTRACTS

Rosenthal, Y. Paleo-ENSO: clues from the past and a look to the future. Israel Society for Ecology and Environmental Quality Sciences. The Weizmann Institute of Science, Israel, 2005
Rosenthal Y., Oppo D.W., and B.K. Linsley, Reconstructing climate variability and the Indonesian throughflow in the western equatorial Pacific. Submitted to the 13th PAMS/JECSS Meeting, Bali July 2005
Rosenthal, Y. and C.H. Lear. Carbonate Ion Effects on Benthic Foraminiferal Mg/Ca-Thermometry. International Conference in Paleoceanography 8, Biarritz France, 2004.
Rosenthal Y., de Garidel-Thoron T. et al. Late Quaternary Paleoclimatology of the western equatorial Pacific. Goldschmidt Conference of Geochemistry. 2003.
Rosenthal, Y. Planktonic foraminiferal Mg/Ca paleothermometry and its application for reconstructing sea surface temperatures. Goldschmidt Conference of Geochemistry. 2002.
Rosenthal, Y., Oppo, D.W., and B.K. Linsley, The amplitude and phasing of climate change during the last deglaciation in the Sulu Sea, western equatorial Pacific. Goldschmidt Conference of Geochemistry. 2002.
Lear C.H., **Rosenthal, Y.** and J.D. Wright. Benthic foraminiferal Mg/Ca paleothermometry and its application to Late Miocene changes in Atlantic circulation. Goldschmidt Conference of Geochemistry. 2002.
Rosenthal, Y., Oppo, D.W., Dannenmann, S. and B.K., Linsley, Millennial-scale variations in western equatorial Pacific sea surface temperature during glacial and Holocene climates. ICP-VII, Sapporo Japan, 2001
Rosenthal, Y., Oppo, D.W., Dannenmann, S. and B.K., Linsley, Millennial-scale variability in western Pacific sea surface temperatures during glacial and Holocene climates. AGU Fall Meeting, Vol. 81, p. 656, 2000.

- Rosenthal, Y.,** Lohmann, G.P. and R.M. Sherrell. Planktonic Foraminiferal Mg/Ca Paleothermometry: A Reappraisal. AGU Spring Meeting, 1999.
- Rosenthal, Y.,** Lohmann, G.P. and R.M. Sherrell. Preservation of Mg in Planktonic Foraminiferal Calcites: Implications for Mg/Ca Paleothermometry. EOS Abstracts, AGU Fall Meeting, Vol. 75, p. 503, 1998.
- Rosenthal, Y.,** and E. A. Boyle. Factors Controlling the Fluoride Content of Foraminifera. EOS Abstracts, AGU Spring Meeting. 158, 1991.

CONTRIBUTED ABSTRACTS

- van de Schootbrugge, B.,* Tremolada, F., **Rosenthal, Y.,** Bailey, T.R., and H. Brinkhuis, End-Triassic calcification crisis and blooms of organic-walled “disaster species”. EGU meeting, Vienna 2005.
- van de Schootbrugge, B.* Bailey, T.R. **Rosenthal, Y.** Wright, J.D. and K.G. Miller and J.M. McArthur, The Toarcian Oceanic Anoxic event (T-OAE): An assessment of global causes using belemnite C-isotope records. Submitted to Geological Society of America Annual meeting, Calgary, Canada 2005
- van de Schootbrugge, B.* Bailey, T.R. **Rosenthal, Y.** Wright, J.D. Miller, K.G. and J.M. McArthur, The Toarcian Oceanic Anoxic event: Not caused by methane. Submitted Geological Society of America Annual meeting, Calgary, Canada 2005
- Sáenz, J. D.,* Montluçon, D., Oppo, **Rosenthal, Y.,** Linsley, B.K., Djajadihardja, Y. S., Syamsudin, F., and T. Eglinton, Preliminary organic geochemical analysis of surficial marine sediments from the Makassar Strait, Indonesia. IMOG 2005
- Grossman E.L., Lear C.H., Sosdian S., and **Y. Rosenthal,** Cenozoic seasonality and global change based on the trace metal composition of serially-sampled mollusk shells. Geological Society of America Annual meeting, Calgary, Canada 2005
- van de Schootbrugge B.,* **Rosenthal Y.,** Miller K.G., and J. Wright, Late Cretaceous (santonian-maastrichtian) evolution of european shelf seas From Belemnite Calcite proxy-records. ($\delta^{13}\text{C}$, $\delta^{18}\text{O}$, Sr/Ca, Mg/Ca) Submitted to International Symposium on the Cretaceous Neuchatel, Switzerland. 2005
- Andreasen, D.,* **Rosenthal, Y.** and J. Wright. Is the tropical Atlantic master or slave to North Atlantic sub-orbital climate variability ? International Conference in Paleoceanography 8, Biarritz France, 2004.
- de Garidel-Thoron, T., **Rosenthal, Y.,** L. Beaufort, and Bassinot, F. Obliquity forcing of tropical Pacific climate and the onset of late Pleistocene glaciations. International Conference in Paleoceanography 8, Biarritz France, 2004.
- van de Schootbrugge, B.* Bailey, T.R. **Rosenthal, Y.** Wright, J.D. Miller K.G. and J.M. McArthur, The Toarcian Oceanic Anoxic Event (T-OAE): Global vs Local Causes. AGU Fall meeting 2004.
- Gentry, K.,* *Sosdian, S.,* Grossman, E.L., Lear, C.H., and **Y. Rosenthal.** Paleoenvironments using seasonal isotope and trace-metal profiles of serially-sampled gastropods. AGU Fall meeting 2004.
- de Garidel-Thoron T.,* **Rosenthal, Y.,** Beaufort L. and F. Bassinot, Holocene hydrological changes in the Western Pacific warm pool, Holivar workshop, Luzern, September 2004.
- Bailey T.R. and **Y. Rosenthal.** Change in seawater chemistry across the Pliensbachian-Toarcian boundary : Pre-conditioning for an Oceanic Anoxic Event ? Goldschmidt Conference of Geochemistry. 2002.

- de Garidel-Thoron, T., Beaufort, L., Bard, E., Mix, A.C., **Rosenthal, Y.** and C. Sonzogni, Glacial-Interglacial Sea Surface Temperatures in the Western Equatorial Pacific using a Multiproxy Strategy, EOS Trans. AGU Fall Meeting Suppl., 83 (47), Abstract PP62A-0329, 2002. Fall AGU 2002. (YR 35% effort)
- Rosenthal Y.**, Stoll H. M., Ravello A. C. and P.G. Falkowski, An experimental evaluation of *Emiliana huxleyi* climate proxies: Organic carbon isotope fractionation and coccolith's chemistry. ICP-VII, Sapporo Japan, 2001.
- Oppo D.W., McManus J.F., Linsley B.K., Dannenmann S., Cullen J.L., **Rosenthal, Y.** and L. Beaufort, Linked and unlinked variability of the western Pacific (Sulu Sea) and North Atlantic throughout the past 400 kyr. ICP-VII, Sapporo Japan, 2001
- Falkowski P.G., **Rosenthal Y.**, and A. Kaplan. Paleoreconstruction of CO₂ from isotopic analyses of organic matter in marine sediments: Promises, promises, promises. CCM meeting Australia, 2001.
- Keigwin L., Sachs J. and **Y. Rosenthal**, A 1600-year history of the Labrador Current off Nova Scotia. GSA Annual Meeting, November 5-8, 2001.
- Field, M.P., **Rosenthal, Y.**, Sherrell, R.M. et al., 2001. The effect of sediment transport on the geochemical dynamics of metal pollutants in Hudson River sediments. GSA Annual Meeting, November 5-8, 2001.
- Rosenthal, Y.**, Dannenmann, S., Oppo, D.W., and B.K., Linsley, 2001. Northern vs. Southern Hemisphere Forcing of Climate Change in the Western Equatorial Pacific. AGU Fall Meeting, 2001.
- Androwski, K. and **Y. Rosenthal**, Foraminiferal fluxes and geochemical proxies calibration along the Southern Ocean 170°W JGOFS transect. AGU Fall Meeting, 2001.
- Dannenmann, S., Lapeis A.G., and **Y. Rosenthal**, The relationship between changes in surface water temperature and $\delta^{18}\text{O}_{\text{seawater}}$ in the tropics and subtropics during the Last Glacial Maximum. AGU Fall Meeting, 2001.
- Trevor B., **Rosenthal, Y.**, and P.G. Falkowski, The Toarcian Oceanic Anoxic Event: New insights into rapid climate change from multi-element proxies. AGU Fall Meeting, 2001.
- Keigwin L., Sachs J. and **Y. Rosenthal**, A 1600-year history of the Labrador Current off Nova Scotia. AGU Fall Meeting, 2001.
- Stoll, H.M., Ziveri, P., **Rosenthal, Y.**, Geisen, M., and I. Probert, Potential and limitations of Sr/Ca ratios in coccolith carbonate. AGU Fall Meeting, 2001.
- Oppo, D.W., Linsley, B.K., **Rosenthal, Y.** Dannenmann, S., and L. Beaufort, A 400-kyr Long Planktic $\delta^{18}\text{O}$ Record From the Sulu Sea: Constraints on Ice Volume and Tropical Hydrologic Cycle. AGU Fall Meeting, 2001.
- Rosenthal Y.**, Stoll H., Wyman, K. and P.G. Falkowski, Growth Related Variations in Carbon Isotopic Fractionation and Coccoliths Chemistry in *Emiliana huxleyi* AGU Ocean Sciences meeting, Winter 2000.
- Stoll H., **Rosenthal Y.**, Falkowski P.G., Klaas C., Ziveri P., Baumaan K.H., Boeckel B., Kinkel H. and G. Ganssen. Sr/Ca of coccolith carbonate: testing the stories of the smallest carbonate repositories. EGS Meeting, Nice, Spring 2000.
- Dannenmann, S., **Rosenthal, Y.**, Linsley, B.K. and D.W. Oppo, Millennial-scale changes in sea surface temperature and oxygen isotopic composition of seawater in the Sulu Sea during Marine Isotope Stage 3. AGU Fall Meeting, Vol. 81, p. 619, 2000.
- Lohmann, G.P., **Rosenthal Y.** and D. McCorkle, A dissolution-corrected record of the temperature and $^{18}\text{O}/^{16}\text{O}$ of equatorial Atlantic surface waters for the past 25,000 years. AGU Fall Meeting, Vol. 81, p. 595, 2000.
- Keigwin L., Sachs J. and **Y. Rosenthal**, The North Atlantic Oscillation (NAO) as a Model for Climate and Ocean Change in the Western North Atlantic During the Past Few Millennia. AGU Chapman Conference November 2000, Spain.

- Rosenthal, Y.**, Field, P.M., and R.M. Sherrell, A rapid and precise determination of trace-metal ratios in calcareous samples using Sector Field Inductively Coupled Plasma Mass Spectrometry. presented at the European Winter Plasma Conference, Pau, France, 1999.
- Pingitore, N.E., **Rosenthal, Y.** and G.P., Lohmann. Synchrotron X-Ray Diffraction of Planktonic Foraminiferal Calcite. EOS Abstracts, AGU Spring Meeting, 1999.
- Lohmann, G.P., **Rosenthal Y.** and D. McCorkle. Evidence for changes in ocean carbonate ion concentration and foraminiferal calcite solubility during the last glaciation. AGU Fall Meeting, 1999.
- Dannenmann, S., **Rosenthal, Y.**, Linsley, B.K., Lill, T., Oppo, D.W., and R.M. Sherrell, High-resolution $\delta^{18}\text{O}$ and Mg/Ca measurements from the Sulu Sea. AGU Fall Meeting, 1999.
- Shemesh A. and **Y. Rosenthal**, Glacial Southern Ocean source of atmospheric carbon dioxide inferred from carbon isotopes in diatoms. Submitted to the Sixth International Conference in Paleoceanography, Lisbon, Portugal 1998.
- Martin, P.A., Lea, D.W., Mashiotta, T.A., **Rosenthal, Y.**, Papenfuss, T.P. and M. Sarnthein, Reconstructing Deep Sea temperatures with Benthic Foraminifera. Submitted to the Sixth International Conference in Paleoceanography, Lisbon, Portugal 1998.
- Rosenthal, Y.** and A. Shemesh. A glacial Southern Ocean record of surface water $p\text{CO}_2$ inferred from carbon isotopes in diatoms. EOS Abstracts, AGU Fall Meeting, Vol. 75, p. 464, 1998.
- Field, M.P. , Sherrell, R.M., **Rosenthal, Y.** and F. Lindsay. Novel Applications of High Resolution Sector Field Inductively Coupled Plasma Mass Spectrometry to Problems in Chemical Oceanography. EOS Abstracts, AGU Fall Meeting, Vol. 75, p. 459, 1998.
- Martin, P. A., Lea, D. W., **Rosenthal, Y.**, Papenfuss, T. P. and M. Sarnthein, Late Quaternary Deep Sea Temperatures Inferred From Benthic Foraminiferal Magnesium. EOS Abstracts, AGU Fall Meeting, Vol. 75, p. 472, 1998.
- Rosenthal, Y.**, and E. A. Boyle. Last glacial maximum reorganization of Southern Ocean circulation, Fifth International Conference in Paleoceanography, Halifax, Nova Scotia, 1995.
- Rosenthal, Y.**, Boyle, E. A. and L. Labeyrie. Did Deepwater form in the Southern Ocean during the LGM ? AGU Fall Meeting 1994.
- Lloyd-Kindstrand, L., **Rosenthal, Y.**, and E. A. Boyle, Depth-Dependent Incorporation of Metals by Benthic Foraminifera: Toward Sorting Out the Pressure, Temperature and Dissolution effects. AGU Fall Meeting 1994.
- Rosenthal, Y.**, Boyle, E. A., Labeyrie, L., and D.W. Oppo. Authigenic Cadmium and Uranium in Southern Ocean Glacial Sediments. EOS Abstracts, AGU Fall Meeting, p. 345, 1993.
- Boyle, E. A. and **Y. Rosenthal**. High-Resolution Paleochemical Variability in South Atlantic Deep Water: Comparison of Benthic Cadmium Data from the South Atlantic and Eastern Tropical Pacific. EOS Abstracts, AGU Fall Meeting, p. 345, 1993.
- Lohmann, G. P. and **Y. Rosenthal**. Effects of secondary calcification and dissolution on the F, Mg, Sr, $\delta^{13}\text{C}$, $\delta^{18}\text{O}$ chemistry of the planktonic foraminifer *Globigerinoides sacculifer*. EOS Abstracts, AGU Fall Meeting, p. 367-368, 1993.
- Rosenthal, Y.**, Boyle, E. A. and L. Labeyrie. Cadmium variability in the glacial Southern Ocean Circumpolar Deep Water. EOS Abstracts, AGU Spring Meeting, 1993.
- Rosenthal, Y.**, and E. A. Boyle. Fluoride in Benthic Foraminifera: A Test for Temperature Effect. EOS Abstracts, AGU Fall Meeting 1991.
- Boyle, E. A. and **Y. Rosenthal**. Depth dependent cadmium incorporation in benthic foraminifera. EOS Abstracts, AGU Fall Meeting 1991.
- Rosenthal, Y.**, and E. A. Boyle. The evolution of anthropogenic lead and cadmium in the Mediterranean Sea. Tera Nova Abstracts, Third International Conference in Paleoceanography, Cambridge, England, 1989
- Rosenthal, Y.**, Katz, A., and E. Tchernov. Trace metals in gastropod shells as paleochemical indicators. Israel Geol. Soc. Annual Meeting, Mitzpe Ramon, 1987.