

BIOGRAPHICAL SKETCH

Enrico Bonatti

Education:

- MSc in Geological Sciences at University of Pisa, 1959
- Science Diploma, Scuola Normale Superiore, Pisa, 1959
- Libera Docenza (Advanced Doctorate), University of Pisa, 1967

Appointments:

- Present (2012)* – Special Senior Scientist, Columbia University, Lamont-Doherty Earth Observatory, and Associate, Institute of Marine Sciences, National Research Council of Italy (CNR)
- 2003 – 2009* Professor of Geodynamics, University of Rome, La Sapienza
- 2003 – 2006:* Director, Institute of Marine Sciences, National Research Council of Italy (CNR)
- 1997 – 2002:* Director, Institute of Marine Geology, National Research Council of Italy (CNR)
- 1997 – 2002:* Professor of Marine Geology, University of Pisa
- 1996 – present:* Special Senior Scientist, Columbia University, Lamont-Doherty Earth Observatory
- 1987 – 1996:* Doherty Senior Scientist, Columbia University, Lamont-Doherty Earth Observatory
- 1975 – 1987:* Senior Research Scientist, Columbia University, Lamont-Doherty Earth Observatory
- 1971:* Visiting Scientist, Harvard University, Fall semester
- 1971 – 1975:* Professor of Marine Geology, University of Miami, Rosenstiel School of Marine and Atmospheric Sciences
- 1968 – 1971:* Associate Professor of Marine Geology, University of Miami, Institute of Marine and Atmospheric Sciences
- 1964 – 1968:* Assistant Professor of Marine Geology, University of Miami, Institute of Marine Sciences
- 1963 – 1964:* Assistant Research Geologist, Scripps Institution of Oceanography
- 1960 – 1963:* Sverdrup Fellow in Oceanography, University of California, Scripps Institute of Oceanography
- 1959 – 1960:* Fulbright Fellow, Yale University (with Professor G.E. Hutchinson).

Awards:

- 1994, elected member of the Russian Academy of Sciences
- 1999, awarded the “H. Patterson Medal” in Oceanography by the Royal Swedish Academy of Sciences
- 2001, awarded the “Feltrinelli Prize” by the Italian Academy of Sciences (Accademia Nazionale dei Lincei)
- 2003, elected “Fellow of the American Geophysical Union”
- 2009, elected member of the European Academy of Sciences
- 2013, elected foreign member of the Italian Academy of Sciences (Accademia dei Lincei)
- 2015 awarded the Shepard Medal for excellence in Marine Geology

Scientific interests:

Structure, composition and temporal evolution of Mid Ocean Ridges. Thermal structure and composition of the oceanic mantle. Mantle’s Hot, Cold and Wet Spots. Ridge-plume interactions. Igneous and tectonic processes during the transition from continental to oceanic rifts. Distribution and origin of water and volatiles in the Earth.

Published about 200 papers, over 20 in Journals such as Nature and Science (see attached list). Published also many popular articles (Scientific American, etc) as well as articles on science politics.

Experience:

Led over 30 marine geology expeditions in the Atlantic, Pacific, Indian and Antarctic oceans, in the Red Sea and Mediterranean. Dived several times to the floor of Mid Ocean Ridges with the Alvin and Nautile submersibles. Done field work in the Afar Rift (Ethiopia), Polar Ural (Russia) and Zambales (Philippines) ophiolites, Zabargad Island (Red Sea), Tunguska (Siberia), etc. Participated on two DSDP/ODP legs. Directed the Institute of Marine Sciences of the Italian National Research Council (CNR). Served in committees and panels, including the historical first Atlantic DSDP Panel chaired by M. Ewing. Thought courses and supervised graduate students at the Universities of Miami, Columbia, Pisa and Rome La Sapienza. Lectured in Institutions around the world.

Citation indices (Google Scholar)

<i>Citations</i>	10520
<i>h-index</i>	59
<i>i10-index</i>	148

Publications (Abstract excluded)

- Bonatti E. (1961). I sedimenti del lago di Monterosi. *Experientia*: (XVII): 252.
- Bonatti, E. (1963). Zeolites in Pacific pelagic sediments. *Trans. N.Y. Acad. of Sciences*, 25: 938.
- Bonatti, E. (1963). Stratigrafia pollinica dei sedimenti postglaciali di Baccano, Lago craterico del Lazio. *Atti Soc. Toscana Science Natur.*, Pisa, 70: 40.
- Bonatti, E. (1965). Palagonite, hyaloclastites and alteration of volcanic glass in the ocean. *Bull. Volcanologique*, 28: 257.
- Bonatti, E. and Nayudu Y.R. (1965). Origin of Mn nodules on the ocean floor. *Am. Jour. Sci.*, 263: 17.
- Lynn, D.C. and Bonatti E. (1965). Mobility of manganese in diagenesis of deep sea sediments. *Marine Geology*, 3: 337.
- Bonatti, E. and G. Arrhenius, 1965. Eolian sedimentation in the Pacific off Northern Mexico. *Marine Geology*, 3: 457.
- Bonatti E., 1965. Il manganese nei fondi oceanici. *Atti Soc. Toscana Science Natur.*, 72: 15.
- Arrhenius G. and Bonatti E. 1965. Neptunism and volcanism in the ocean. *Progress in Oceanography*, 3: 7. Ed. M. Sears, Pergamon Press.
- Arrhenius G. and E. Bonatti, 1965. The Mesa Verde Loess. *American Antiquity*, 31: 92.
- Bonatti E., 1966. North Mediterranean climate during the last Wurm glaciation, *Nature*, 209: 984.
- Bonatti E., 1966. Deep sea authigenic calcite and dolomite. *Science*, 153: 534.
- Bonatti E., and O. Joensuu, 1966. Deep sea iron deposits from the south Pacific, *Science*, 154: 643.
- Bonatti E., 1967. Mechanisms of deep sea volcanism in the South Pacific. In: *Researches in Geochemistry*, 2: 453; Ed. P. Abelson; J. Wiley and Sons, New York.
- Bonatti E., 1968. Late Pleistocene and postglacial stratigraphy of a sediment core from the Lagoon of Venice, Italy. *Memorie di Biogeografia Adriatica*, 7, 1.
- Fisher, D.E., E. Bonatti. O. Joensuu and J. Funkhouser, 1968. Ages of Pacific deep sea basalts and spreading of the sea floor. *Science*, 160: 1106.
- Bonatti E. and O. Joensuu, 1968. Palygorskite from Atlantic deep sea sediments. *American Mineralogists*, 53: 975.
- Bonatti E., 1968. Ultramafic rocks from the Mid-Atlantic Ridge. *Nature*, 219: 363.
- Bonatti E., 1968. Fissure basalts and ocean floor spreading on the East Pacific Rise. *Science*, 161: 886.
- Funkhouser, J.G., D.E. Fisher and E. Bonatti, 1968. Excess argon in deep sea rocks. *Earth Planet. Sci. Lett.*, 5: 95.

- Prospero, J. and E. Bonatti, 1969. Continental dust in the atmosphere of the Eastern Equatorial Pacific. *J. Geophys. Res.*, 74: 3362.
- Bonatti E., 1969. Fissure basalts and sea floor spreading on the East Pacific Rise: A Discussion. *Science*, 165: 1181.
- Bonatti E., M. Ball and C. Schubert, 1970. Evaporites and continental drift. *Naturwissenschaften*, 57: 107.
- Bonatti E. and H. Tazieff, 1970. Exposed guyot from the Afar Rift, Ethiopia. *Science*, 168: 1087.
- Gomberg D. and E. Bonatti, 1970. High-magnesium calcite: Leaching of Mg in the deep sea. *Science*, 168: 1451.
- Bonatti E., 1970. Pollen sequences from the sediments of the lake of Monterosi (Italy). *Trans. Amer. Phil. Soc.*, 60: 26.
- Bonatti E., 1970. Deep sea volcanism. *Naturwissenschaften*, 57: 379.
- Prospero J., E. Bonatti, C. Schubert and T. Carlson, 1970. Dust in the Garibbean atmosphere traced to an African dust storm. *Earth Planet. Sci. Lett.*, 9: 287.
- Bonatti E., J. Honnorez and G. Ferrara, 1970. Equatorial Mid-Atlantic Ridge: Petrologic and Sr-isotopic evidence for an alpine-type rock assemblage. *Earth Planet. Sci. Lett.*, 9: 247-256.
- Honnorez J. and E. Bonatti, 1970. Nepheline gabbro from the Mid-Atlantic Ridge. *Nature*, 228: 850-852.
- Bonatti E. and G. Arrhenius, 1971. Acidic rocks on the Pacific Ocean floor. In: *The Sea*, 4 (A. Maxwell, ed.) Interscience Publ., 445.
- Bonatti E., D.E. Fisher, O. Joensuu and H. Rydell, 1971. Post-depositional mobility of some transition elements, phosphorus, uranium and thorium in deep sea sediments. *Geochim. Cosmochim. Acta*, 35: 189.
- Bonatti E., J. Honnorez and G. Ferrara, 1971. Peridotite-gabbro-basalt complex from the equatorial Mid-Atlantic Ridge. *Phil Trans. Royal Soc.*, London, A, 268: 385.
- Bonatti E., C. Emiliani, G. Ostlund and H. Rydell, 1971. Final dessication of the Afar Rift, Ethiopia. *Science*, 172: 468.
- Bonatti E., 1971. Ancient continental mantle beneath oceanic ridges. *J. Geophys. Res.*, 76: 3825-3831.
- Bonatti E. and D. E. Fischer, 1971. Oceanic basalts: Chemistry versus distance from oceanic ridges. *Earth Planet. Sci. Lett.*, 11: 307-311.
- Bonatti E., 1971. Manganese fluctuations in Caribbean sediment cores due to post-depositional remobilization. *Bull. Mar. Sci.*, 21: 510-518.
- Bonatti E. and J. Honnorez, 1971. Non-spreading crustal blocks at the Mid-Atlantic Ridge. *Science*, 174: 1329-1331.
- Bonatti E., D.E. Fisher, O. Joensuu and H. Rydell, 1972. Iron-manganese-barium deposit from the Afar Rift, Ethiopia. *Econ. Geology*, 67: 717-730.
- Bonatti E., T. Kraemer and H. Rydell, 1972. Classification and genesis of submarine iron-manganese deposits. In: *"Ferromanganese deposits from the ocean floor"*, Symposium volume, D. Horn, editor, Columbia Univ., p. 149-165.
- Bonatti E., 1972. Mineral authigenesis in the ocean, In: *Encyclopedia of Geochemistry*, R. Fairbridge, editor, Van Nostrand Co., p. 48-56.
- Bonatti E., J. Honnorez, O. Joensuu and H. Rydell, 1972. Submarine iron deposits from the Mediterranean Sea, In: *"The Mediterranean Sea"*, edited by D. Stanley, Dowden, Hutchinson and Ross Publishers, 701-710.
- Bonatti E., 1973. Origin of the offsets of the Mid-Atlantic Ridge in fracture zones. *J. Geology*, 81: 144-186.
- Bonatti E., J. Honnorez and S. Gartner, 1973. Sedimentary serpentinites from the Mid-Atlantic Ridge. *J. Sediment. Petrol.*, 43: 728-735.
- Rydell, H. and E. Bonatti, 1973. Uranium in submarine metalliferous deposits. *Geochim. Cosmochim. Acta*, 37: 2557-2565.
- Bonatti E. and S. Gartner, 1973. Caribbean climate during Pleistocene ice ages. *Nature*, 244: 563-565.
- Barberi F., E. Bonatti, G. Marinelli and J. Varet, 1974. Transverse tectonics during the split of a continent: Data from the Afar Rift. *Tectonophysics*, 23: 17-29.
- Bonatti E., C. Emiliani, G. Ferrara, J. Honnorez and H. Rydell, 1974. Ultramafic-carbonate breccias from the equatorial Mid-Atlantic Ridge. *Marine Geology*, 17: 83-102.

- Bonatti E., J. Honnorez, P. Kirst and f. Radicati, 1975. Metagabbros from the Mid-Atlantic Ridge at 06 N: Contact-hydrothermal-dynamic metamorphism beneath the axial valley. *J. Geology*, 83: 61-78.
- Schilling, J.G. and E. Bonatti, 1975. East Pacific Ridge (2 S-19 S) versus Nazca intraplate volcanism: Rare earth evidence. *Earth Planet. Sci. Letters*, 25: 93-102.
- Bonatti E., 1975. Metallogenesis at oceanic spreading centers. Ann. Review *Earth Planet. Sci.*, 3: 401-431.
- Honnorez J., E. Bonatti, C. Emiliani, P. Brannimann, M.A. Furrer and A.A. Meyeroff, 1975. Mesozoic limestone from the Vema offset zone, Mid-Atlantic Ridge. *Earth Planet. Sci. Letters*, 26: 8-12.
- Harrison C.G. A., E. Bonatti and L. Stieltjes, 1975. Tectonism of axial valleys in spreading centers. Data from the Afar Rift. In "*Afar Depression of Ethiopia*", eds., A. Pilger and A. Rosler, Stuttgart, W. Germany, p. 178-198.
- Bonatti E., M. Zerbi, R. Kay and H. Rydell, 1976. Metalliferous deposits from the Apennine ophiolites. Mesozoic equivalents of modern deposits from oceanic spreading centers. *Bull. Geol. Soc. Amer.*, 87, 83-94.
- Bonatti E. and C.G. A. Harrison, 1976. Hot Lines in the Earth's Mantle. *Nature*, 263, 402-404.
- Bonatti E., M.B. Guerstein-Honnoez, J. Honnorez and C. Stern, 1976. Hydrothermal pyrite concretions from the Romanche Trench: Metallogenesis in oceanic fracture zones. *Earth Planet. Sci. Letters*, 32, 1-10.
- Bonatti E. and J. Honnorez, 1976. Sections of the Earth's crust in the equatorial Atlantic. *J. Geophys. Res.*, 81, 4104-4116.
- Bonatti E., M.B. Guerstein-Honnoez and J. Honnorez, 1976. Copper-iron sulfide mineralizations from the equatorial Mid-Atlantic Ridge. *Econ. Geol.*, 71, 1515-1525.
- Bonatti E., 1976. Serpentinite protrusions in the oceanic crust. *Earth Planet. Sci. Lett.*, 32, 107-113.
- Prinz M., K. Keil, J.A. Green, A.M. Reid, E. Bonatti and J. Honnorez, 1976. Ultramafic and mafic dredge samples from the equatorial Mid-Atlantic Ridge and fracture zones, *J. Geoph. Res.*, 81, 4087-4103.
- Bonatti E., C.G.A. Harrison, D.E. Fisher, J. Honnorez, J.G. Schilling, J.J. Stipp and M. Zentilli, 1977. Easter Volcanic Chain (Southeast Pacific): A Mantle Hot Line. *J. Geoph. Res.*, 82, 2457-2478.
- Bonatti E., M. Sarntheim, A. Boersma, M. Gorini and J. Honnorez, 1977, Neogene crustal emersion and subsidence at the Romanche fracture zone, equatorial Atlantic. *Earth Planet. Sci. Lett.*, 35, 369-383.
- Bonatti E., K. Hartman, F. Innocenti and R. Kay, 1977. Basalt drilled from the Vema Fracture zone. *Deep Sea Drilling Project*, Initial Reports, 39, 507-511.
- Bonatti E. (1978). Vertical tectonism in oceanic fracture zones. *Earth Planet. Sci. Lett.*, 37, 369-379.
- Bonatti E. (1978). Genesis of metal deposits in the oceanic lithosphere. *Scientific American*, 238, 54-61.
- Bonatti E. and P.R. Hamlyn (1978). Mantle uplifted block in the western Indian Ocean. *Science*, 201, 249-251.
- Bonatti E., Kolla V., Moore W.T., Stern C. (1979). Metallogenesis in marginal basins: Fe-rich basal deposits from the Philippine Sea. *Marine Geology*, 32, 21-37.
- Bonatti E., Chermak A. and Honnorez J. (1979). Tectonic and igneous emplacement of crust in oceanic transform zones. *2nd Ewing Symposium Volume, AGU*, 239-248.
- Kolla V., L. Nadler and E. Bonatti, 1980. Clay mineral distribution in surface sediments of the The Phillipine Sea. *Oceanol Acta*, 3, 245-250.
- Hamlyn P.R. and Bonatti E., 1980. Petrology of mantle-derived ultramafics from the Owen fracture zone, northwest Indian Ocean: implications for the nature of the oceanic upper mantle. *Earth Planet. Sci. Lett.*, 48, 65-79.
- Bonatti E., J. Lawrence, P.R. Hamlyn and D. Breger, 1980. Aragonite from deep sea ultramafic rocks. *Geochim. Cosmochim. Acta*, 44, 1207-1214.
- Bonatti E. et al. (CNR Red Sea Cruise Staff), 1980. Geology of the Red Sea between 23° and 25° N: preliminary results. *Accademia Nazionale Lincei*, meeting on Geodynamic Evolution of the Afro-Arabian Rift System, 607-613.
- Bonatti E., and A. Cermak, 1981. Formerly emerging crustal blocks from the equatorial Atlantic. *Tectonophysics*, 72, 165-180.
- Bonatti E. and P.R. Hamlyn, 1981. Oceanic ultramafic rocks. The Oceanic Lithosphere, In: *The Sea*, C. Emiliani, Ed., vol. VII: Wiley, New York, 241-283.

- Harrison, C.G.A. and E. Bonatti, 1981. The Oceanic Lithosphere, In: *The Sea*, C. Emiliani, Ed., vol. VII: Wiley, New York, 21-48.
- Bonatti E., 1981. Metal Deposits in the Oceanic Lithosphere, In: *The Sea*, C. Emiliani, Ed., vol. VII: Wiley, New York, 639-686.
- Bonatti E., P.R. Hamlyn and G. Ottonello, 1981. The upper mantle beneath a young oceanic rift: peridotites from the island of Zabargad (Red Sea). *Geology*, 9, 474-479.
- Bonatti E. and K. Crane, 1982. Oscillatory spreading explanation of anomalously old uplifted crust near oceanic transforms. *Nature*, 300, 343-345.
- Bonatti E., R. Sartori and A. Boersma, 1983. Vertical crustal movements at the Vema fracture zone in the Atlantic: evidence from dredge limestones. *Tectonophysics*, 91, 213-232.
- Bonatti E., R. Clocchiatti, P. Colantoni, R. Gelmini, G. Marinelli, G. Ottonello, R. Santacroce, M. Taviani, A.A. Abdel-Meguid, H.S. Assaf and M. A. El Tahir, 1983. Zabargad (St. John) Island: An uplifted fragment of sub-Red Sea lithosphere. *Jour. Geol. Soc. London*, 14D, 667-690.
- Bonatti E., E.C. Simmons, D. Breger and P.R. Hamlyn, 1983. Ultramafic rocks/sea water interaction in the oceanic crust: Mg silicate (sepiolite) deposit from the Indian Ocean floor. *Earth Planet. Sci. Lett.*, 62, 2229-238.
- Bonatti E., 1983. Hydrothermal metal deposits from oceanic rifts: a classification in: "Hydrothermal Processes at Seafloor Spreading Centers" NATO Conference Series in *Marine Sciences*, Plenum Press. p. 491-502.
- Bonatti E., Colantoni P., Della Vedova B. and Taviani M., 1984. Geology of the Red Sea Transitional Region, 22°N to 25°N. *Oceanologica Acta.*, 7, 385-398.
- Bonatti E., Lawrence L. and Morandi N., 1984. Serpentinization of oceanic peridotites: Temperature dependence of mineralogy and boron content. *Earth Planet. Sci. Lett.*, 70, 88-94.
- Bonatti E. and Crane K., 1984. Oceanic fracture zones. *Scientific American*, 250: 5, 39-51.
- Otter.(Bonatti E. et al.) 1984. The Geology of the Oceanographer Transform: the ridge-transform intersection. *Marine Geoph. Res.*, 6: 109-141.
- Bonatti E., 1985. Transition from a continental to an oceanic rift: punctiform initiation of sea floor spreading in the Red Sea. *Nature*, 316, 33-37.
- Michael P.J., and E. Bonatti, 1985. Peridotite composition from the North Atlantic: regional and tectonic variations and implications for partial melting. *Earth Planet. Sci. Lett.*, 73, 91-104.
- Michael, P.J. and E. Bonatti, 1985. Petrology of ultramafic rocks from sites 556, 558 and 560, DSDP leg 82 in the north Atlantic. *Initial Reports DSDP*, 82, 523-528.
- Bonatti E. 1986. Variabilità nelle zone di accrescimento di litosfera oceanica: rift "lenti" e "veloci", rift che si propagano, rift che si accavallano, rift che si esauriscono. *Mem. Soc. Geo. It.*, 27, 23-34.
- Bonatti E., Ottonello G. and Hamlyn P.R., 1986. Peridotites from the island of Zabargad. (St. John's) Red Sea: Petrology and geochemistry, *J. Geoph. Res.*, 91, 599-631.
- Bonatti E., P. Colantoni, F. Lucchini, P.L. Rossi, M. Taviani and J. White, 1986. Chemical and stable isotope aspects of the Nereus Deep (Red Sea) metal-enriched sedimentation. *Mem. Soc. Geol. It.*, 27, 59-72.
- Otter.(Bonatti E. et al.), 1986. The geology of the Oceanographer Transform: the transform domain, *Mar. Geoph. Res.* 7, 329-358.
- MacDonald K.C., D. Castillo, S. Miller, P.J. Fox, K. Kastens and E. Bonatti, 1986. Deep tow studies of the Vema fracture zone: Tectonics of a major slow slipping transform fault and its intersection with the Mid-Atlantic Ridge. *J. Geophys. Res.*, 91, 3334-3354.
- Bonatti E., 1987. The rifting of continents, *Scientific American*, 256, 96-103.
- Bonatti E., and M. Seyler, 1987. Crustal underplating and evolution in the Red Sea rift. *J. Geophys. Res.*, 92, 12083-12821.
- Bonatti E. and C.G.A. Harrison, 1988. Eruption styles of basalt in oceanic spreading ridges and seamounts: effects of magma temperature and viscosity, *J. Geophys. Res.*, 93, 2967-2980.

- Brueckner H., A. Zindler, E. Bonatti and M. Seyler, 1988. Zabargad and the pan-African Miocene isotopic evolution of the sub-Red Sea mantle, *Tectonophysics*, 150, 1633-176.
- Seyler M., and E. Bonatti, 1988. Petrology of the gneiss/amphibolite lower crustal unit from Zabargad island, Red Sea, *Tectonophysics*, 150, 177-208.
- Petrini R., J.L. Loren, G. Ottonello, E. Bonatti and M. Seyler, 1988. Basaltic dykes from Zabargad island, Red Sea: petrology and geochemistry. *Tectonophysics*, 150, 229-298.
- Bonatti E., and P.J. Michael, 1989. Mantle peridotites from continental rifts to ocean basins to subduction zones. *Earth Planet. Sci. Lett.*, 91, 297-311.
- Auzende J.M., D. Bideau, e. Bonatti, M. Cannat, J. Honnorez, Y. Lagabrielle, J. Malavielle, V. Mamaloukis-Frangoulis, C. Mevel, 1989. Direct observation of a section through slow-spreading oceanic crust, *Nature*, 337, 726-729.
- Bonatti E., M. Seyler, J. Channell, J. Girardeau and G. Mascle, 1990. Peridotites drilled from the Tyrrhenian Sea, ODP leg 107. Proc. Ocean Drilling Prog., *Scientific Res.*, 107, 37-47.
- Beccaluva L., E. Bonatti, et al., 1990. Geochemistry and mineralogy of volcanic rocks from sites 650, 651, 654 and 655, ODP leg 107, Tyrrhenian Sea, Proc. Ocean Drilling Prog., *Scientific Res.*, 107, 49-74.
- Bonatti E., 1990a. Subcontinental mantle exposed in the Atlantic Ocean on St. Peter-Paul islets. *Nature*, 345, no. 6278, 800-802.
- Bonatti E. 1990b. Not so hot "hot spots" in the ocean's mantle. *Science* 250, 107-111.
- Auzende, J.M., E. Bonatti, et al., 1990. The MAR-Vema F.Z. intersection surveyed by deep submersible Nautile, *Terra Research*, 2, 68-73.
- Mamaloukas V., E. Bonatti et al., 1991. In situ study of the eastern ridge-transform intersection of the Vema F.Z., *Tectonophysics*, 190, 55-71.
- Cannat M., E. Bonatti, et al., 1991. A geological cross section of the Vema Fracture Zone transverse ridge, Atlantic Ocean. *Jour. Geodynamics*, 13, 97-118.
- Bonatti E., A. Peyve, P. Kepezhinskas, N. Kurentsova, M. Seyler, S. Skolotnev and G. Udintsev, 1992. Upper mantle heterogeneity below the Mid-Atlantic Ridge, 0°-15° N. *J. Geophys. Res.*, 97, 4461-4476.
- Lagabrielle Y., V. Maloukas-Frangoulis, M. Cannat, J.M. Auzende, J. Honnorez, C. Melvel and E. Bonatti, 1992. Vema Fracture Zone (Central Atlantic): tectonic and magmatic evolution of the median ridge and the eastern ridge-transform intersection domain. *J. Geophys. Res.*, 97, B12, 17, 331-17, 351.
- Marshak S., E. Bonatti, H. Brueckner and T. Paulsen, 1992. Fracture-zone tectonics at Zabargad Island, Red Sea (Egypt), *Tectonophysics*, 216, 379-385.
- Bonatti E., M. Seyler, N. Sushevskaya, 1993. A cold suboceanic mantle belt at the Earth's equator. *Science*, 261, 315-320.
- Bonatti E., Y. Raznitsin, G. Bortoluzzi, et al., 1993. Geological studies of eastern part of the Romance Transform, equatorial Atlantic: a first report. *Giornale di Geologia*, 53, 31-48.
- Bonatti E., D. Daniele and A. Peyve, 1993. Peridotites from the Chain fracture zone in the equatorial Atlantic: preliminary report. *Acta Vulcanologica*, 2, 65-71.
- Bonatti E. and M. Ligi, 1994. L'evoluzione geologica dell'Atlantico equatoriale. *Le Scienze*, 305, 34-44.
- Bonatti E., 1994. The mantle beneath the oceans. *Scientific American*, 270, 24-33.
- Seyler M. and E. Bonatti, 1994. Na, ⁶Al and ⁴Al in clinopyroxene of subcontinental and suboceanic ridge peridotite: a clue to different melting processes in the mantle. *Earth Planet. Sci. Lett.*, 122, 281-289.
- Bonatti E., 1994. The Earth's mantle below the Oceans. *Scientific American*, 270, 26-33. Tradotto in *Le Scienze*.
- Bonatti E., M. Ligi, E. Vera., L. Gasperini, G. Carrara, 1994. Imaging crustal uplift, emersion and subsidence at the Vema fracture zone in the Atlantic. *EOS*, 75, 371-372.
- Bonatti E., M. Ligi, L. Gasperini, A. Peyve, Y. Raznitsin and Y.J. Chen, 1994. Transform migration and vertical tectonics at the Romanche fracture zone, equatorial Atlantic, *J. Geophysical Res.*, 99, 21779-21802.

- Bonatti E., M. Ligi, G. Carrara, L. Gasperini, N. Turko, S. Perfiliev, A. Peyve and P.F. Sciuto., 1996. Diffuse impact of the mid Atlantic Ridge with the Romanche transform: an ultracold ridge/transform intersection. *J. Geophysical Res.*, 101, 8043-8054.
- Bonatti E., M. Ligi, A.M. Borsetti, L. Gasperini., A. Negri and R. Sartori, 1996. Lower Cretaceous deposits trapped near the Mid Atlantic Ridge and the opening of the equatorial Atlantic. *Nature*, 380, 518-520.
- Bonatti E., 1996. Anomalous opening of the equatorial Atlantic due to an equatorial mantle thermal minimum. *Earth Planet. Sci. Lett.*, 143, 147-160.
- Bonatti E., 1996. Long-lived oceanic transform boundaries formed above mantle thermal minima. *Geology*, 24, 803-806.
- Gasperini L., E. Bonatti, M. Ligi, E. Sartori, A.M. Borsetti, A. Negri, and S. Sokolov, 1997. Stratigraphic and paleoenvironmental analysis of the carbonate platform on the Romance transverse ridge, equatorial Atlantic. *Marine Geology*, 136, 245-257.
- Seyler M. and E. Bonatti, 1997. Regional scale melt-rock interaction in lherzolitic mantle in the Romanche Fracture Zone, Atlantic Ocean. *Earth Planet Sci. Lett.*, 146, 273-287.
- Ligi M., E. Bonatti, G. Bortoluzzi, G. Carrara, P. Fabretti, D. Penitenti, D. Gilod, A.A. Peyve, S. Skolotnev and N. Turko, 1997. Death and Transfiguration of a Triple Junction in the South Atlantic. *Science*, 276, 243-245.
- Bonatti E., A.A. Bulichev., D.A. Gilod, N. Zitellini, E.Y. Kulikov, M. Ligi, E. Lodolo, A.A. Shreider, 1997. Comprehensive geomagnetic research on the triple junction near Bouvet Island. *Oceanology*, 37(6), 809-820.
- Fabretti P., E. Bonatti et. al. 1998. First results of cruise S19 (Primar Project): petrological and structural investigations of the Vema Transverse Ridge (Equatorial Atlantic). *Giornale di Geologia*, vol. 60, 3-16.
- Kastens K., E. Bonatti, D. Caress, G. Carrara, O. Dauteuil, G. Frueh-Green, M. Ligi and P. Tartarotti, 1998. The Vema Transverse ridge (Central Atlantic). *Marine Geophysical Research*, vol. 15, 1-30.
- Ligi M., E. Bonatti, G. Bortoluzzi, G. Carrara, P. Fabretti, L. Gilod, A. Peyve, S. Skolotnev, and N. Turko, 1999. Geology of the Bouvet Triple Junction (South Atlantic). *Journal of Geophysical Research*, 104, 29365-29385.
- Peyve A.A. and E. Bonatti, 1999. Peridotites from the Bouvet and Conrad Fracture Zones, Southern Atlantic Ocean. *Doklady Earth Sciences*, 367A, 791-793.
- Gasperini L., Bernoulli D., Bonatti E., Borsetti A.M., Ligi M., Negri A., Sartori R. and von Salis K., 2001. Lower Cretaceous to Eocene sedimentary transverse ridge at the Romanche Fracture Zone and the opening of the equatorial Atlantic. *Marine Geology*, 176, 101-119.
- Bonatti E., 2001. Internal breathing of the Earth: Deep cycles of water and carbon. In: Earth System Science, *Proc. International School Earth Planet. Sciences*, Siena, 127-142.
- Bonatti E., Ligi M., Brunelli D., Fabretti P., Portaro R.A. and Seyler M., 2001. Steady-state creation of crust-free lithosphere at cold spots in mid ocean ridges. *Geology*, 29, 979-982.
- Ligi M., Bonatti E., Gasperini L. and Polyakov A.N.B., 2002. Oceanic broad multi-fault transform plate boundary. *Geology*, 30, 11-14.
- K. Kastens, e Bonatti, D. Caress, G. Carrara, O. Dauteuil, G. Frueh-Green, M. Ligi, P. Tartarotti (1998). The Vema Transverse Ridge (Central Atlantic). *Marine Geophys. Res.*, 20 (6), 533-556
- M. Ligi, E. Bonatti, G. Bortoluzzi, G. Carrara, P. Fabretti, D. Gilod (1999) "Bouvet Triple Junction in the South Atlantic: Geology and evolution." *J Geophys Res.*, 104 (B12), 29365-29385
- A.A. Peive, E. Bonatti, (1999), "Peridotites from the Bouvet and Conrad Fracture Zones, Southern Atlantic Ocean.", *Doklady Earth Sciences* 367A, 6, 791-793
- Bizimis M., Salters V., Bonatti E. (2000) "Trace AND REE content of clinopyroxenes from supra-subduction zone peridotites". *Chemical Geology*, 165, 67-85
- Vikent'ev, I.V., Bonatti E., Peive A.A. (2000) "Ore mineralization in the typical section of the oceanic crust, Vema fracture zone, 10 degrees 45' N". *Doklady Earth Sciences*, 375A/9, 1350-1353
- L. Gasperini, D. Bernoulli, E. Bonatti, A.M. Borsetti, M. Ligi, A. Negri, R. Sartori, K. von Salis, (2001), "Lower Cretaceous to Eocene sedimentary transverse ridge at the Romanche Fracture Zone and the opening of the Equatorial Atlantic." *Marine Geology*, 176, 101-119

- E. Bonatti, D. Brunelli, P. Fabretti, M. Ligi, R. Portaro, M. Seyler, (2001), "Steady-state creation of crust-free lithosphere at cold spots in mid-ocean ridges." *Geology* 29/11, 979-998
- Sushchevskaya N.M., Bonatti E., Peyve A.A., Kamenetskii V.S., Belyatskii B.V., Tsekhonya T.I., Kononkova N.N. (2002) "Heterogeneity of rift magmatism in the equatorial province of the Mid-Atlantic Ridge (15° N to 3° S)". *Geochemistry International*, 40, 26-50
- Ligi M., Bonatti E., Gasperini L., Poliakov A.N.B. (2002) "Oceanic broad multifault transform plate boundaries. *Geology*. 30, 11-14
- Bonatti E., Ligi M., Brunelli D., Cipriani A., Fabretti P., Ferrante V., Ottolini L., (2003), "Mantle thermal pulses below the Mid Atlantic Ridge and temporal variations in the oceanic lithosphere.", *Nature*, 423, 499-505
- Dogliani, C., E. Carminati and E. Bonatti (2003), "Rift Asymmetry and continental uplift. *Tectonics*" 22, 3, 1024, 1-13.
- Brunelli D., Bonatti E., Cipriani A., Ottolini L., (2003), "Mantle peridotites from the Bouvet Triple Junction Region, South Atlantic." *Terra Nova*, 15, 194-203
- Bernoulli D., Gasperini L, Bonatti E, et al. (2004). Dolomite formation in Pelagic limestone and diatomite, Romanche Fracture Zone, equatorial. *Atlantic Journal of Sedimentary Research* 74 (6): 924-932.
- Polonia A, Gasperini L., Amorosi A., Bonatti E. et al. (2004). Holocene slip rate of the North Anatolian Fault beneath the Sea of Marmara. *Earth and Planetary Science Letters*, 227 (3-4): 411-426.
- Cipriani A., Brueckner H.K., Bonatti E., Brunelli D. (2004), "Oceanic crust generated by elusive parents: Sr and Nd isotopes in basalt-preidotite pairs from the Mid –Atlantic Ridge." *Geology*, 32/8, 657-660.
- Ligi M., Bonatti E, Cipriani A. and L. Ottolini (2005). Water-rich basalts at mid-ocean-ridge cold spots. *Nature*, 434 (7029): 66-69.
- Bonatti E., D. Brunelli, W.R. Buck, A. Cipriani, P. Fabretti, V. Ferrante, L. Gasperini and M. Ligi, (2005), Flexural uplift of a lithospheric slab near the Vema transform (Central Atlantic): timing and mechanisms, *Earth Planet. Sci. Lett.*, 240, 642-655.
- Brunelli D., Seyler M., Cipriani A., Ottolini L. and Bonatti E., (2006), Discontinuous melt extraction and weak refertilization of mantle peridotites at the Vema lithospheric section (Mid-Atlantic Ridge), *Journal of Petrology* 47 (4), 745-771.
- Cormier, MH; Seeber, L; McHugh, CMG; Polonia, A; Cagatay, N; Emre, O; Gasperini, L; Gorur, N; Bortoluzzi, G; Bonatti, E; Ryan, WBF; Newman, KR (2006). North Anatolian Fault in the Gulf of Izmit (Turkey): Rapid vertical motion in response to minor bends of a nonvertical continental transform, *Journal of Geophysical Research-Solid Earth*, 111 (B4).
- Gasperini, L., Alvisi, F., Biasin, G., Bonatti, E., Longo, G., Pipan, M., Ravaioli, M., Serra, R. (2007). A possible impact crater for the 1908 Tunguska, *Terra Nova*, 19 (4): 245-251.
- Peyve, AA., Skolotnev, SG., Ligi, M., Turko, NN., Bonatti, E., Kolodyazhnyi, SY., Chamov, NP., Tsukanov, NV., Baramykov, YE., Eskin, AE., Grindlay, N., Sclater, JG., Brunelli, D., Pertsev, AN., Cipriani, A., Bortoluzzi, G., Mercuri, R., Paganelli, E., Muccini, F., Takeuchi, C., Zaffagnini, F., Dobrolyubova, KO., (2007). Investigation of the Andrew Bain transform fault zone (African-Antarctic region). *Doklady Earth Sciences*, 416 (7): 991-994.
- Gasperini, L., Bonatti, E., Longo, G., (2008). Lake Cheko and the Tunguska event: Impact or non-impact? *Terra Nova*, 20 (2): 169-172.
- Gasperini, L., Bonatti, E., Longo, G., (2008). The Tunguska mystery. *Scientific American*, 298 (6): 80.
- Bonatti, E. (2008). Oedipus, turkeys, and a revolution in the earth sciences. *International Journal of Earth Sciences*, 97 (4): 861-864.
- Gasperini L. , Bonatti E., Albertazzi S., Forlani L., Accorsi C. A., Longo G., Ravaioli M., Alvisi F., Polonia A., Sacchetti F. (2009). Sediments from Lake Cheko (Siberia), a possible impact crater for the 1908 Tunguska Event. *Terra Nova*, 21, doi: 10.1111/j.1365-3121.2009.00906.x
- Cipriani, A., Bonatti, E., Seyler, M., Brueckner, HK., Brunelli, D., Dallai, L., Hemming, SR., Ligi, M., Ottolini, L., Turrin, BD. (2009). A 19 to 17 Ma amagmatic extension event at the Mid-Atlantic Ridge: Ultramafic mylonites from the Vema Lithospheric Section. *Geochemistry Geophysics Geosystems*, 10.
- Cipriani, A., Bonatti, E., Brunelli, D., Ligi, M. (2009). 26 million years of mantle upwelling below a segment of the Mid Atlantic Ridge. The Vema Lithospheric section revisited. *Earth Planet. Sci. Lett.*, 285, 87-95.

- Mitchell N.C., M. Ligi, V. Ferrante, E. Bonatti & E. Rutter (2010). Submarine salt glaciers in the central Red Sea. *Geol. Soc. Am. Bull.*, 122 (5/6), 701-713.
- Caratori Tontini F., Cocchi L., Muccini F., Carmisciano C., Marani M., Bonatti E., Ligi M., Boschi E. (2010). Potential-field modeling of collapse-prone submarine volcanoes in the southern Tyrrhenian Sea (Italy), *Geophys. Res. Lett.*, 37 (3), L03305, doi:10.1029/2009GL041757.
- Ligi M., Bonatti E., Caratori Tontini F. et al. (2011). Initial burst of oceanic crust accretion in the Red Sea due to edge-driven mantle convection. *Geology*, 39, 1019-1022.
- Cipriani A., Bonatti E., Carlson R.W. (2011) Nonchondritic (142)Nd in suboceanic mantle peridotites. *Geochemistry Geophysics Geosystems*, 12, Q03006, doi: 10.1029/2010GC003415.
- Bonatti E. (2012) Did Time exist in the Cretaceous? In Kastens K.A. and Manduca C.A. eds. Geol. Soc. America Special Paper 486, 29-30.
- Ligi M., Bonatti E., Bortoluzzi G., Cipriani A., Cocchi L., Caratori Tontini F., Carminati E., Ottolini L., Schettino A. (2012). Birth of an ocean in the Red Sea: Initial pangs. *Geochemistry Geophysics Geosystems*, 13, Q08009, doi:10.1029/2012GC004155.
- Bonatti E., Crane K. (2012). Oceanography and Women: Early Challenges. *Oceanography*, 25, 32 – 39.
- Polonia A., Bonatti E., Camerlenghi A., Lucchi R. G. , Panieri G., Gasperini L. (2013). Mediterranean megaturbidite triggered by the AD 365 Crete earthquake and tsunamis. *Scientific reports*, 3, doi:10.1038/srep01285.
- Kamenetsky V. S., Maas R., Fonseca R. O. C., Ballhaus C., Heuser A., Brauns M., Norman M. N., Woodhead J. N., Rodemann T., Kuzmin D. V., Bonatti E. (2013). Noble metals potential of sulfide-saturated melts from the subcontinental lithosphere. *Geology*, 41, 575 – 578.
- Boschi C., Bonatti E., Ligi M., Brunelli D., Cipriani A., Dallai L., D’Orazio M., Früh-Green G. L., Tonarini S., Barnes J. D., Bedini R. M. (2013). Serpentinization of Mantle Peridotites along an Uplifted Lithospheric Section, Mid Atlantic Ridge at 11° N. *Lithos*, 178, 3 – 23.
- Ligi M., Bonatti E., Cuffaro M., Brunelli D. (2013). Post-Mesozoic Rapid Increase of Seawater Mg/Ca due to Enhanced Mantle-Seawater interaction. *Scientific reports*, 3, doi:10.1038/srep02752.
- Palmiotto C., Corda L., Ligi M., Cipriani A., Dick H.J.B., Douville E., Gasperini L., Montagna P., Thil F., Borsetti A., Balestra B., and Bonatti E. (2013). Nonvolcanic tectonic islands in ancient and modern oceans. *Geochemistry Geophysics Geosystems*, doi: 10.1002/ggge.20279.
- Bonatti E. (2014). The Anthropocene: of time, mice, and men. *Rend. Fis. Acc. Lincei*, 25(1), 21-27.
- Ligi M., Bonatti E., Rasul N.M.A. (2015). Seafloor Spreading Initiation: Geophysical and Geochemical Constraints from the Thetis and Nereus Deeps, Central Red Sea. In “*The Red Sea- The Formation, Morphology, Oceanography and Environment of a Young Ocean Basin*” Eds. N.M.A. Rasul and I.C.F. Stewart. Springer Earth Sciences Series, 79-98, Springer-Verlag Berlin.
- Bonatti E., Cipriani A. and Lupi L. (2015). The Red Sea: Birth of an Ocean. In “*The Red Sea- The Formation, Morphology, Oceanography and Environment of a Young Ocean Basin*” Eds. N.M.A. Rasul and I.C.F. Stewart. Springer Earth Sciences Series, 29-44, Springer-Verlag Berlin.
- Bonatti E., Breger D., Di Rocco T., Franchi F., Gasperini L., Polonia A., Anfinogenov J. and Anfinogenova Y. (2015). Origin of John’s Stone: A quartzitic boulder from the site of the 1908 Tunguska (Siberia) Explosion, *Icarus*, doi: doi: 10.1016/j.icarus.2015.06.018.