

## CURRICULUM VITAE: ELVIRA OLIVERI

### PERSONAL DETAILS

Name: Elvira Oliveri  
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### EDUCATION

**February-August 2002- Erasmus–Socrates project.** Period of training at the Complutense University of Madrid. Supervisor: Prof. Jose Pedro Calvo Sorando, Director of the Dep. Petrology and Geochemistry. Training focus: investigation on microbial microtextures recorded in the carbonate rocks using SEM method.

**March 2003- Degree in Geological Sciences with the mark 110/110 - University of Palermo.** Dissertation: “*Petrographic and geochemical study of Pliocene lacustrine sediment: microbial activity in dolomite precipitation*”. Advisor: Prof. Rodolfo Neri (University of Palermo); Prof. Jose Pedro Calvo Sorando (Complutense University of Madrid).

**May 2005- PhD research project.** Period of research activity at the School of Earth, Ocean and Planetary Sciences University of Cardiff, Wales, U.K. Supervisor: Dr. Robert Riding, reader in Paleobiology and Geomicrobiology. Research focus: study of the microbial microtexture in the Calcare di Base (Messinian Age) from Sicily basin.

**March 2007- Ph.D. in Geochemistry financed by the European Social Fund.** Defence on March 29th 2007. Dissertation: “*Geochemical imprint of bacterial activity in Lower Messinian carbonates from the Sutura section, Caltanissetta Basin: palaeoenvironmental implication*”. Advisor: Prof. Rodolfo Neri.

### EMPLOYMENT

2008-2012 Postdoctoral Researcher, Institute for Coastal Marine Environment-CNR (National Research Council)  
2012-today Researcher, Institute for Coastal Marine Environment-CNR (National Research Council)

### RESEARCH INTERESTS

PhD project was focused on investigation of the processes promoting carbonate precipitation in the stromatolites formed in a Messinian hypersaline setting and (ii) relating the petrographic evidence of microbial activity to geochemical (O and C isotopes, Sr, REE) signatures. Postdoctoral research activities were focused on mineralogical and geochemical study of oxic and anoxic marine sediments for paleoenvironmental reconstruction (paleoredox proxy) and on biogeochemical cycle of Mercury (**Hg**) in coastal marine sediment, with particular attention for biochemical processes controlling early diagenesis within sediment. At present, research activity deals with biogeochemical processes of toxic metal/metalloid such as Mercury (**Hg**) and Arsenic (**As**) in the different environmental matrices and at the water-sediment interfaces, in the three study area of Augusta, Milazzo and Crotone.

### TECHNICAL COMPETENCIES

Use of analytical equipment: Scanning Electron Microscope (SEM), X-Ray Diffraction Spectrometry (XRD), X-ray fluorescence spectrometry (XRF) and Mass Spectrometry for the determination of carbonate oxygen and carbon stable isotopes

### SELECTED PUBLICATIONS (REVIEWED JOURNALS)

Bagnato, E., **Oliveri, E.**, Acquavita, A., Covelli, S., Petranich, E., Barra, M., Italiano, F., Parello, F., Sprovieri, M. Hydrochemical mercury distribution and air-sea exchange over the submarine hydrothermal vents off-shore Panarea Island (Aeolian arc, Tyrrhenian Sea). *Marine chemistry*, 194, 63-78.

Salvagio Manta, D., Bonsignore, M., **Oliveri, E.**, Barra, M., Tranchida, G., Giaramita, L., Mazzola, S., Sprovieri, M. (2016). Fluxes and the mass balance of mercury in Augusta Bay (Sicily, southern Italy). *Estuarine, Coastal and Shelf Science*, 181, 134-143.

**Oliveri, E.**, Salvagio Manta, D., Bonsignore, M., Cappello, S. Tranchida, G. Bagnato, E. Sabatino, N. Santisi, S. Sprovieri, M. (2016). Mobility of mercury in contaminated marine sediments: biogeochemical pathways. *Marine Chemistry*, 186, 1-10.

D'Agostino, F., **Oliveri, E.**, Bagnato, E., Falco, F., Mazzola, S., Sprovieri, M., (2014). Direct determination of total mercury in phosphate rock using alkaline fusion digestion. *Analytica Chimica Acta*, 852, 8-12.

M. Sprovieri, M. Barra, M. Del Core, G. Di Martino, S. Gherardi, S. Innangi, **E. Oliveri**, S. Passaro, T. Romeo, P. Rumolo, D. Salvagio Manta, S. Tamburrino, R. Tonielli, A. Traina, M. Vallefucio, S. Mazzola and F. Andaloro, 2013. Marine pollution from shipwrecks at the sea bottom: a case study from the Mediterranean basin. In: T.B Hughes (Ed), *Mediterranean Sea: Ecosystems, Economic Importance and Environmental Threats*, Nova Science Publishers, pp 35-43.

**E. Oliveri**, M. Sprovieri, D. Salvagio Manta, L. Giaramita, V. La Cono, F. Lirer, P. Rumolo, N. Sabatino, G. Tranchida, M. Vallefucio, M. M Yakimov, Salvatore Mazzola, 2013. Sediment geochemistry of the Thetis hypersaline anoxic basin (eastern Mediterranean Sea). *Sedimentary Geology*, 296, 72-85.

Bagnato, E., Sprovieri, M., Barra, M., Bitetto, M., Bonsignore, M., Calabrese, S., Di Stefano, V., **Oliveri, E.**, Parello, F., Mazzola, S., (2013). The sea-air exchange of mercury (Hg) in the marine boundary layer of the Augusta basin (southern Italy): concentrations and evasion flux. *Chemosphere* 93, 2024-2032

V. La Cono, F. Smedile, G. Bortoluzzi, E. Arcadi, G. Maimone, E. Messina, M. Borghini, **E. Oliveri**, S. Mazzola, S. L'Haridon, L. Toffin, L. Genovese, M. Ferrer, L. Giuliano, P. N. Golyshin, and M. M. Yakimov, 2011. Unveiling microbial life of new deep-sea hypersaline lake Thetis. Part 1 I: Prokaryotes and environmental settings. *Environmental Microbiology and Environmental Microbiology reports*, DOI:10.1111/j.1462-2920.2011.02478.x.

M. Sprovieri, **E. Oliveri**, R. Di Leonardo, E. Romano, A. Ausili, M. Gabellini, M. Barra, G. Tranchida, A. Bellanca, R. Neri, F. Budillon, R. Saggiomo, S. Mazzola and V. Saggiomo, 2011. The key role played by the Augusta basin (southern Italy) in the mercury contamination of the Mediterranean Sea. *Journal of Environmental Monitoring*, DOI: 10.1039/c0em00793e.

G. Tranchida, **E. Oliveri**, M. Angelone, A. Bellanca, P. Censi, M. D'Elia, R. Neri, F. Placenti, M. Sprovieri, S. Mazzola, 2011. Distribution of rare earth elements in marine sediments from the Strait of Sicily (western Mediterranean Sea): Evidence of phosphogypsum waste contamination. *Marine Pollution Bulletin*, 62, 182-191.

P. Censi, A. Incarbona, **E. Oliveri**, S. Bonomo, G. Tranchida, 2010. Yttrium and REE signature recognized in central Mediterranean Sea (ODP site 963) during the MIS 6 - MIS 5 transition. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 292, 201-210.

**E. Oliveri**, R. Neri, A. Bellanca, R. Riding, 2010. Carbonate stromatolites from a Messinian hypersaline setting in the Caltanissetta Basin, Sicily: petrographic evidence of microbial activity and related stable isotope and REE signatures. *Sedimentology*, 57, 142-161.