SELECTED PUBLICATIONS

1) Piccardo G.B. (2015) – Passive rifting and continental splitting in the Jurassic Ligurian Tethys: the mantle perspective. Geol. Soc. London, Spec. Publ. (in press)

2) Padovano M., Piccardo G.B., and Vissers R.L.M. (2015). Tectonic and magmatic evolution of the mantle lithosphere during the rifting stages of a fossil slow-ultraslow spreading basin: insights from the Erro-Tobbio peridotite (Voltri Massif, NW Italy). Geol. Soc. London, Spec. Publ. (in press)

3) Piccardo G.B. (2014) - Anatomy of the Ligurian Tethys: a geodynamic model based on field/laboratory studies and numerical/analogue modeling. Rend. Online Soc. Geol. It., Suppl. n. 1 al Vol. 31.

4) Piccardo G.B., Padovano M. and Guarnieri L. (2014) - The Ligurian Tethys: Mantle processes and geodynamics. Earth-Science Reviews (online) , DOI 0.1016/j.earscirev.2014.07.002

5) Piccardo G.B. (2013) - Reply to the comment by Marco Scambelluri on the paper: 'Subduction of a fossil slow-ultraslow spreading ocean: a petrology-constrained geodynamic model based on the Voltri Massif, Ligurian Alps, NW Italy' by G. B. Piccardo. International Geology Review, DOI:10.1080/00206814.2013.782967

6) Vissers, R.L.M., Van Hinsbergen, D.J.J., Meijer, P.TH. & Piccardo, G.B. (2013). Kinematics of Jurassic ultra-slow spreading in the Piemonte Ligurian ocean. Earth and Planetary Science Letters, 380, 138–150.

7) Piccardo, G.B. (2012) - The Voltri Massif: Hic sunt leones? Rendiconti Online della: Società Geologica Italiana, v. 21, p. 308–310.

8) Piccardo G.B. (2012) - Subduction of a fossil slow-ultraslow spreading ocean: a petrology-constrained geodynamic model based on the Voltri Massif, Ligurian Alps, Nortwestern Italy. International Geology Review, iFirst, 1-17.

9) Guarnieri L., Nakamura E., Piccardo G.B., Sagaguchie C., Shimizu N., Vannucci R., Zanetti A. (2012). Petrology, Trace Element and Sr, Nd, Hf Isotope Geochemistry of the North Lanzo Peridotite Massif (Western Alps, Italy), Journal of Petrology, 53(11), 2259-2306.

10) Piccardo, G.B. (2012). Subduction of a fossil slow-ultraslow spreading ocean: a petrology constrained geodynamic model based on the Voltri Massif, Ligurian Alps, Northwest Italy. International Geology Review, iFirst, 2012, 1-17.

11) Piccardo G.B., Guarnieri L. (2011). Gabbro-norite cumulates from strongly depleted MORB melts in the Alpine-Apennine ophiolites. In: Dick H., Montanini A., Piccardo G.B., Tribuzio R. (eds): Alpine Ophiolites and Modern Analogues. Lithos Special Issue 124, 200-214.

12) Piccardo G.B., Guarnieri L. (2010). Alpine peridotites from the Ligurian Tethys: an updated critical review, International Geology Review, 54, 1138–1159.

13) Piccardo G.B., (2010). The Evolution of the Lithospheric Mantle during Mesozoic Rifting in the Ligure-Piedmontese Domain. In: (Eds.) Beltrando M., Peccerillo A., Mattei M., Conticelli S., Doglioni C., The Geology of Italy, Journal of the Virtual Explorer, Electronic Edition, 36, paper 7.

14) Piccardo G.B., Ranalli G., Guarnieri L. (2010). Seismogenic Shear Zones in the Lithospheric Mantle: Ultramafic Pseudotachylytes in the Lanzo Peridotite (Western Alps, NW Italy), Journal of Petrology, 51, 81-100.

15) Piccardo G.B., Vannucci R., Guarnieri L. (2009). Evolution of the lithospheric mantle in an extensional setting: Insights from ophiolitic peridotites. Lithosphere, 1, 81-87.

16) Piccardo G.B., Guarnieri L. (2010). The Monte Maggiore peridotite (Corsica, France): a case study of mantle evolution in the Ligurian Tethys. In: Coltorti, M., Downes, H., Gregoire, M. & O'Reilly, S. Y. (eds), Petrological Evolution of the European Lithospheric Mantle. Geological Society, London, Special Publications, 337, 7–45.

17) Piccardo G.B., (2010). The Lanzo peridotite massif, Italian Western Alps: Jurassic rifting of the Ligurian Tethys. In: Coltorti, M., Downes, H., Gregoire, M. & O'Reilly, S. Y. (eds), Petrological Evolution of the European Lithospheric Mantle. Geological Society, London, Special Publications, 337, 47–69.

18) Piccardo G.B., (2009). Geodynamic evolution of the Jurassic Ligurian Tethys viewed from the mantle perspective. Ital. J. Geosci. (Boll. Soc. Geol. It.), 128, 565-574.

19) Piccardo G.B.. (2008). The Jurassic Ligurian Tethys, a fossil ultra-slow spreading ocean: the mantle perspective. In: Coltorti M. Gregoire M. (eds). Metasomatism in oceanic and continental lithospheric mantle. The Geological Society of London, Special Publications, vol. 293, pp. 11-33.

20) Piccardo G.B., Ranalli G, Vissers R.L.M. (2007). The geodynamic evolution of the Jurassic Ligurian Tethys viewed from a mantle perspective. Rend. Soc. Geol. It., vol.5, Nuova Serie, 197-201.

21) Corti G., Bonini M., Innocenti F., Manetti P., Piccardo G.B. (2007). Experimental models of extension of continental lithosphere weakened by percolation of asthenospheric melts. Journal of Geodynamics. vol. 43, pp. 465-483.

22) Piccardo G.B. (2007). Evolution of the ultra-slow spreading Jurassic Ligurian Tethys: view from the mantle. Periodico di Mineralogia. vol. 76, pp. 67-80.

23) Piccardo G.B., Ranalli G., Marasco M., Padovano M. (2007). Ultramafic pseudotachylytes in the Mt.Moncuni peridotites (Lanzo Massif, Western Alps): tectonic evolution and upper mantle seismicity. Periodico di Mineralogia. Vol. 76, pp. 181-197.

24) Piccardo G.B., Vissers R.L.M. (2007). The pre-oceanic evolution of the Erro-Tobbio peridotite (Voltri Massif - Ligurian Alps, Italy). Journal of Geodynamics. vol. 43, pp. 417-449.

25) Piccardo G.B., Zanetti A, Muentener O. (2007). Melt/peridotite interaction in the Southern Lanzo peridotite: Field, textural and geochemical evidence. Lithos. vol. 94(1-4), pp. 181-209.

26) Piccardo G.B., Zanetti A, Pruzzo A. Padovano M. (2007). The North Lanzo peridotite body (NW-Italy): lithospheric mantle percolated by MORB and alkaline melts. Periodico di Mineralogia, vol. 76, 2-3, pp. 199-221.

27) Ranalli G., Piccardo G.B. (2007). Softening of the subcontinental lithospheric mantle by asthenosphere melts and the continental extension / oceanic spreading transition. Journal of

Geodynamics. vol. 43, pp. 450-464.

28) Rampone E., Romairone A., Hofmann A., Abouchami W., Piccardo G.B. (2005). Chronology, petrology and isotope geochemistry of the Erro-Tobbio Peridotites (Ligurian Alps, Italy): records of Late Palaeozoic lithospheric extension. Journal of Petrology. vol. 46, pp. 799-827.

29) Piccardo G.B., Muentener O., Zanetti A., Pettke T. (2004). Ophiolitic peridotites of the Alpine-Apennine System: mantle processes and geodynamic relevance. In: W.G.Ernst (Ed), Serpentine and serpentinites: mineralogy, petrology, geochemistry, ecology, geophysics and tectonics. : Bellwether Publ. Ltd. for Geological Society of America., pp. 214-254 .

30) Piccardo G.B., Muentener O., Zanetti A., Pettke T. (2004). Ophiolitic peridotites of the Alpine-Apennine system: mantle processes and geodynamic relevance. International Geology Review. vol. 46, pp. 1119-1159.

31) Muentener O., Piccardo G.B. (2003). Melt migration in ophiolitic peridotites: the message from Alpine-Appennine peridotites and implication from embryonic ocean basins. In: Dilek Y., Robinson P.T. Ophiolites in the Earth History, Geological Society of London, Special Publications, vol. 218, pp. 69-89.

32) Piccardo G.B. (2003). Mantle processes during ocean formation: petrologic records in peridotites from the Alpine-Apennine ophiolites. Episodes. vol. 26, pp. 193-199.

33) Rampone E., Piccardo G.B. (2001). The ophiolite - oceanic lithosphere analogue: new insights from the Northern Apennines. Geology Society of America Bulletin. pp. 75-91.

34) Scambelluri M., Rampone E., Piccardo G.B. (2001). Fluid and element cicling in subducted serpentinite: a trace-element study of the Erro-Tobbio high-pressure ultramafites (Western Alps, NW Italy). Journal of Petrology. vol. 42, pp. 55-67.

35) Rampone E., Piccardo G.B. (2000). The ophiolite - oceanic lithosphere analogue: New insights from the Northern Apennine (Italy). In: Dilek J., Moores E., Elthon D., Nicolas A. Ophiolites and Oceanic Crust: New Insights from Field Studies and Ocean Drilling Program. Geology Society of America Bulletin.vol. 349, pp. 21-34.

36) Hermann J., Muentener O., Trommsdorff V., Hansmann W., Piccardo G.B. (1997). Fossil crust-to-mantle transition, Val Malenco (Italian Alps). Journal of Geophysical Research. vol. 102, pp. 123-132.

37) Rampone E., Piccardo G.B., Vannucci R., Bottazzi P. (1997). Chemistry and origin of trapped melts in ophiolitic peridotites. Geochimica et Cosmochimica Acta. vol. 61, pp. 4557-4569.

38) Rampone E., Hofmann A.W., Piccardo G.B., Vannucci R., Bottazzi P., Ottolini L. (1996). Trace element and isotope geochemistry of depleted peridotites from an NMORB-type ophiolite (Internal Liguride, N. Italy). Contribution To Mineralogy and Petrology vol. 123, pp. 61-76.

39) Rivalenti G., Vannucci R., Rampone E., Mazzucchelli M., Piccardo G.B., Piccirillo E.M., Bottazzi P., Ottolini L. (1996). Peridotite clinopyroxene chemistry reflects mantle processes rather than continental versus oceanic settings. Earth and Planetary Science Letters. vol. 139, pp. 423-437.

40) Rampone E., Hofmann A.W., Piccardo G.B., Vannucci R., Bottazzi P., Ottolini L. (1995). Petrology, mineral and isotope geochemistry of the External Liguride Peridotites (Northern Apennine, Italy). Journal of Petrology. vol. 36, pp. 81-105.

41) Vannucci R., Piccardo G.B., Rivalenti G., Zanetti A., Rampone E., Ottolini L., Oberti R., Mazzucchelli M., Bottazzi P., (1995). Origin of LREE-depleted amphiboles in the sub-continental mantle. Geochimica et Cosmochimica Acta. vol. 59, pp. 1763-1771.

42) Piccardo G.B., Rampone E., Scambelluri M. (1994). Ophiolitic peridotites from Liguria (NW Italy): implications on rifting and subduction processes. Acta Vulcanologica. vol. XXXVI, 141-144, pp. 221-242.

43) Piccardo G.B., Rampone E., Vannucci R., Shimizu N., Ottolini L., Bottazzi P., (1993). Mantle processes in the sub-continental lithosphere: the case study of the rifted splherzolites of the Zabargad Island (Northern Red Sea). European Journal of Mineralogy. vol. 5, pp. 1039-1056.

44) Scambelluri M. Hoogerduijn Starting E.H., Piccardo G.B., Vissers R.L.M., Rampone E., (1991). Alpin olivine- and titanian clinohumite-bearing assemblages in the Erro-Tobbio peridotite (Voltri Massif, NW Italy). Journal of Metamorphic Geology. vol. 9, pp. 79-91.

45) Vannucci R., Shimizu N., Bottazzi P., Ottolini L., Piccardo G.B., Rampone E. (1991). Rare Earth and trace element geochemistry of clinopyroxenes from the Zabargad peridotite-pyroxenite association. Journal of Petrology. pp. 255-269.

46) Beccaluva L., Macciotta G., Piccardo G.B. (1984). Petrology of lherzolitic rocks from the Northern Apennine ophiolites. Lithos. vol. 17, pp. 299-316.

47) Ottonello G., Joron J.L., Piccardo G.B. (1984). Rare Earth and 3d transition element geochemistry of peridotitic rocks: II. Ligurian peridotites and associated basalts. Journal of Petrology. vol. 25, pp. 373-393.

48) Capaldi G., Manetti P., Piccardo G.B. (1983). Preliminar investigations on vulcanism of the Sadah Region (Yemen Arabic Republic) Bull. Volcanology, 46, 413-427.

49) Messiga B., Piccardo G.B., Ernst W.G. (1983). High-Pressure Apine parageneses developed in magnesian metagabbros, Gruppo di Voltri, Western Liguria, Italy. Contributions to Mineralogy and Petrology, 83, 1-15.

50) Ernst W.G., Rambaldi E., Piccardo G.B. (1983). Trace element geochemistry of Iron + Titanium – rich eclogitic rocks, Gruppo di Voltri, Western Liguria. Journal of Geology, 91, 413-425.

51) Cimmino F., Messiga B., Piccardo G.B. (1981) - Paragenetic characteristics of the H-P eo-Alpine event in the different systems (pelitic, mafic, ultramafic) of the metamorphic ophiolites of the Gruppo di Voltri (Western Liguria). Rend. SIMP, 37, 419-446.

52) Ottonello G., Piccardo G.B., Joron S.L., Treuil M. (1980) - Nature of the deep crust and upper mantle under the Assab Region (Ethiopia): inference from petrology and geochemistry of mafic-ultramafic inclusions. In: Atti del Convegno dei Lincei 47: Geodynamic evolution of the Afro-Arabian Rift System, 463-490.

53) Ernst W.G., Piccardo G.B. (1979) - Petrogenesis of some Ligurian peridotites: I. Mineral and bulk rock chemistry. Geochimica et Cosmochimica Acta. vol. 43, pp. 219-237.

54) Ottonello G., Piccardo G.B. Ernst W.G., (1979) - Petrogenesis of some Ligurian peridotites - II. Rare Earth Element chemistry. Geochimica et Cosmochimica Acta. vol. 43, pp. 1273-1284.

55) Piccardo G.B. (1979) - Petrology of the Northern Apennini and Voltri Massif Ohiolites. The Earth Montly, 1, 365-372 (in giapponese)

56) Galli M., Messiga B., Piccardo G.B. (1979) - Characters petrographiques du Massif Crystalline de Savone et du Groupe de Voltri. Bull. Soc. Geol. France, 4, 389-400.

57) Piccardo G.B., Ottonello G. (1978) - Partial melting effects on coexisting mineral compositions in upper mantle xenoliths from Assab (Ethiopia). Rend. SIMP, 34, 499-526.

58) Ottonello G., Piccardo G.B., Joron J.L., Treuil M. (1878) - Evolution of the upper mantle under the Assab Region (Ethiopia): suggestions from petrology and geochemistry of tectonitic ultramafic xenoliths and host basaltic lavas. Geol. Rundschau, 67, 547-576.

59) Ottonello G., Piccardo G.B., Mazzucotelli A., Cimmino F. (1978) - Clinopyroxene-orthopyroxene major and rare elements partitioning in spinel peridotite xenoliths from Assab (Ethiopia). Geochimica et Cosmochimica Acta, 42.

60) Beccaluva L., Piccardo G.B. (1978) - Petrology of the Northern Apennine Ophiolites and their significance in the Western Mediterranean Area. In: H. Closs, D. Roeder, Schmidt K.: Alps, Apennine, Hellenides. Stutgart, 243-253.

61) Ernst W.G., Ottonello G., Piccardo G.B. (1977) - Geochemical and mineralogical investigations of some Ligurian peridotite. Ofioliti, 2, 375-380.

62) Cortesogno L., Ernst W.G., Galli M., Messiga B., Pedemonte G., Piccardo G.B. (1977) - Journal of Geology, 85, 255-277.

63) Piccardo G.B. (1977) - Le ofioliti dell'areale ligure: petrologia e ambiente geodinamico di formazione. Rendiconti SIMP, 33, 221-252.

64) Cimmino F., Pedemonte G., Piccardo G.B. (1976) - Petrology of ultramafic xenoliths in fissure alkali basalts of the Assab Region (Afar, Ethiopia).Rendiconti SIMP, 32, 561-577.

65) Bortolotti V., Lapierre H., Piccardo G.B. (1976) - Tectonics of the Troodos Massif (Cyprus): preliminary results. Tectonophysics, 35, T1-T5.

66) Piccardo G.B., Riccio L. (1975) - I complessi ofiolitici dell'Isola di Terranova (Canada): litologia e stratigrafia. Correlazione con le ofioliti liguri. Boll. Soc. Geol. It., 94, 695-724.

67) Galli M., Bezzi A., Piccardo G.B., Cortesogno L., Pedemonte G.M. (1972) - Le ofioliti dell'Appennino Ligure: un frammento di crosta-mantello "oceanici" dell'antica Tetide. Mem. Soc. Geol. It., 11, 467-502.

68) Bezzi, A. and Piccardo, G.B. (1971) - Structural features of the Ligurian ophiolites: petrologic evidence for the “oceanic” floor of the Northern Appennine geosyncline: a contribution to the alpine-type gabbro-peridotite associations. Mem. Soc. Geol. It., 10, 55-63.

69) Bezzi A., Piccardo G.B. (1970) - Studi petrografici sulle formazioni ofiolitiche della Liguria. Riflessioni sulla genesi dei complessi ofiolitici in ambiente apenninico e alpino. Rend. SIMP, 26.

Citation in: Juteau T. (2003). Identification of mantle unit in ophiolites: A major step in the evolution of the ophiolite concept. Geological Society of America, Special Paper 373.

“Ligurian Ophiolites in the Northern Apennines, Italy.

Ligurian ophiolites were studied again at the end of the 1960s, and re-interpreted as tectonic fragments of the ocean floor of the “northern Apennine geosyncline”. Among the many papers published during this period, the most suggestive one was Bezzi and Piccardo’s review of the structural features of the Ligurian ophiolites, published by the Geological Society of Italy (Bezzi and Piccardo, 1971).

According to the authors, “the lherzolites and related rocks may represent more or less recrystallized primary material from the upper mantle, deformed and re-equilibrated during its tectonic evolution” (Bezzi and Piccardo, 1971, pg. 58). They concluded that … these new data favor the hypothesis that the Ligurian mafic and ultramafic rocks, characterized by the association of basic extrusive rocks, gabbro-peridotite cumulates and ultramafic tectonites, are slices of the ophiolitic material derived from the lower crust and upper mantle, and form the oceanic basaltic oceanic crust, that make up the ancient ocean basin floor (Bezzi and Piccardo, 1971, pg. 60).”