Short academic profile

NADIA MALASPINA
Born on 11/10/1977 in Genova, Italy
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2021-2032: Italian National Scientific Habilitation to function as Full Professor in Petrology (04/A1 – GEO/07)
2022-2025: Secretary of the Italian Society of Mineralogy and Petrology (SIMP)

EDUCATION

• 2006: Ph.D. in Earth Sciences (University of Genova, Italy)
• 2002: Master of Science cum laude in Geology (University of Genova, Italy)

RESEARCH ACTIVITY AND POSITIONS

• 2019–today: Associate professor in Petrology (GEO/07) at the University of Milano-Bicocca
• 2022: Research activity at Institut de Physique du Globe de Paris, Université de Paris Cité (France) in the frame of the project "A transitional metal stable isotope (Fe, Zn, Cu) study of metasomatised mantle wedges in subduction zones, comparison between Alpine (Europe) and Dabie-Sulu (China) suprasubduction peridotites"
• 2017–2019: Research activity at Universität Jena (Germany) in the frame of the project Miur-DAAD Joint Mobility Program "The redox state of the Earth's mantle: from the slab-mantle interface to the sub-continental lithosphere"
• 2010-2019: Research permanent position at the University of Milano-Bicocca
• 2017-2018: Research activity at Plymouth University (UK) in the frame of NERC project "The geological record of the earthquake cycle in the lower crust"
• 2008-2010: Post-doctoral fellowship at the Department of Earth Sciences (University of Milano, Italy) in the frame of the project "Oxidation state of the mantle and origin of COH fluids in orogenic areas"
• 2007-2010: Research activity at the Bayerisches Geoinstitut, University of Bayreuth (Germany) in the frame of the European program "Marie Curie Research Training Network c2c – the fate of subducted material"
• 2006-2008: Post-doctoral fellowship at the Department of Earth Sciences (University of Milano, Italy) in the frame of the project "COH fluids, hydrates, carbonates and crust-to-mantle mass transfer in subduction zones"
• 2004-2005: Research activity at the Research School of Earth Sciences (Australian National University), Canberra, Australia

SCIENTIFIC INTERESTS

Study of natural samples from the continental crust and lithospheric mantle in subduction environments aimed to understand:
• **Mechanisms of element transfer from the subducting plate to the mantle**, with particular interest in the analysis of volatile elements (C-O-H) in metamorphic minerals and fluids and their behaviour at ultrahigh pressure;
• **Role of fluid phases in metasomatic processes** responsible for hydration and carbonation of the mantle at subduction zones;
• **Oxidation state of mafic and ultramafic rocks**, speciation of crustal fluids components at subduction zones and its implication in the global geochemical cycle of volatile elements;
• **Role of fluid phases in deformation mechanisms** of the lower crust and in the earthquakes genesis;
• **Role of ultramafic rocks and minerals in carbon capture, storage and utilisation** in the frame of circular economy.

EXPERTISE AND SKILLS

Integrated approach in the study of natural samples including field work, petrologic characterisation of the samples and advanced analytical and experimental techniques such as:
• **Field work**: Dabie-Sulu Belt (China), Western Gneiss Region (Norway), Western and Central Alps (Italy), Anarak (Iran), Lofoten (Norway), Pohorje (Slovenia)
• **Geochemical analyses** with Laser Ablation ICP-MS (Malaspina et al., 2006, *Earth Planet Sci Lett* 249,

173-187)
• **High pressure experiments** and synthesis of minerals with piston cylinder (single stage and end-loaded) and multianvil
• **High temperature experiments** and synthesis of minerals with vertical furnace at controlled oxygen fugacity (Malaspina et al. 2009, J Petrol 50, 1533-1552)
• **WDS spectrometer calibration** for Flank Method analyses and quantitative maps to measure the Fe^{3+} content in garnets with the JEOL electron microprobe (Malaspina et al. 2010, *Earth Planet Sci Lett* 298, 417-426)
• Development of **forward thermodynamic modelling** with the software "Perple_X" (Malaspina & Tumiati 2012, *Eur J Mineral* 24, 607-618)

SOFT SKILLS
• Large Classroom Teaching Workshop (24-25 January 2019); open badge: https://bestr.it/verify/FJWL01EO4A
• Bbetween 2018 Multimedia – Video Editing: intermediate course (12 November 2018); open badge: https://bestr.it/verify/DLDNORBGJ1

SCIENTIFIC AWARDS
• **SIMP Award 2007**: for the best Ph.D. thesis in Petrology (Geoitalia 2007, Rimini; Elements, v. 4, ISSN 1811-5209)
• **Young Scientist Award**: EGU General Assembly 2007, Vienna

FUNDED RESEARCH COMPETITIVE PROJECTS AS PRINCIPAL INVESTIGATOR OR PROJECT PARTNER
• 2023: **Prin2022** "Competing geological and biological processes in underground carbon and hydrogen storage" (Bologna – Napoli – Milano-Bicocca – Milano) 24 months – Research Unit Coordinator (224 k€)
• 2022: **Università degli Studi di Milano-Bicocca – Fondo di Ateneo Quota Competitiva** "Redox processes and implications on C-O-H-S budget from the shallow crust to the deep mantle" 24 months – Principal Investigator (25 k€)
• 2021: **Fondazione Cariplo – Circular Economy for a sustainable future** "ANTICARB –Quarry waste ANTIgorite CARBonation: a zero emission platform for re-manufacturing with the benefit of CO_2 sequestration" (Milano-Bicocca – Politecnico di Milano) 48 months – Principal Investigator (300 k€)
• 2019: **Prin2017** "The Dynamic Mass Transfer from Slabs to Arcs - Dynastars" (Genova – Milano – Milano-Bicocca – Pavia – Padova) 36 months – Research Unit Coordinator (384 k€)
• 2018: **Miur-DAAD Joint Mobility Program** "The redox state of the Earth's mantle: from the slab-mantle interface to the sub-continental lithosphere" (Milano Bicocca – Jena) 24 months – Principal Investigator (20 k€)
• 2017: **NERC Research Grant** "The geological record of the earthquake cycle in the lower crust" (Plymouth University, UK) 36 months - Project Partner (451 k£)

FUNDED RESEARCH COMPETITIVE PROJECTS AS TEAM MEMBER
• 2021: Presidenza del Consiglio dei Ministri, Dipartimento per la Pari Opportunità "SVELAMI-B – SVolgere Esperimenti nei LAboratori di MIlano-Bicocca" (University of Milano-Bicocca) 2 months
• 2014: Prin 2012 "Volatile transfer at convergent plate margins: linking COH fluids/melts heterogeneities to tectonic anomalies in subduction zones" (University of Milano) 36 months
• 2013: ECoS "Evolution of continental strength from rifting to collision" (Plymouth University, UK) 48 months
• Darius Programme "The palaeotethys suture zone in NE Iran: new constraints on the evolution of the eo-cimmerian belt" (University of Milano Bicocca) 24 months
• 2011: Prin 2009 "Fluid speciation and redox processes in ultramafic systems at subduction zones: integration of the natural record with an experimental approach" (University of Milano) 24 months
• 2008: Prin 2007 "An experimental approach to the study of dehydration and decarbonation processes in the subducted oceanic lithosphere" - (University of Milano) 24 months
• 2007: Marie Curie Research Training Network "c2c the fate of subducted material" (University of Milano) 48 months

FUNDED RESEARCH COMPETITIVE PROPOSALS AT LARGE SCALE FACILITIES
• 2023: **European Synchrotron Radiation Facility** "Ferric iron in serpentinites as proxy for abiotic H2 production", beamline (ID24) experiment number ES-1410 – Team Member
• 2022: **European Synchrotron Radiation Facility** "Electronic and atomic structures of iron oxalate", beamline (ID18) experiment number HC-5141 – Team Member

• 2021: **European Synchrotron Radiation Facility** "Constraining the geomagnetic field at mantle depth by the determination of the hyperfine magnetic field of iso-oriented micromagnetite inclusions in olivine single crystals", beamline (ID18) experiment number ES-1108 – Team Member
• 2020: **European Synchrotron Radiation Facility** "The redox state of marble-cake mantle: clues from deeply recycled C-bearing crustal materials", beamline (ID18) experiment number ES-958 – Principal Investigator
• 2016: **Diamond Light Source** "The smaller, the harder: multiphase micro-inclusions in majoritic garnet as signatures of deep Earth mantle conditions", beamline (I15) experiment number EE14855 – Principal Investigator
• 2013: **Diamond Light Source** "Diopsides in diamonds: new geobarometric approaches", beamline (I15) experiment number EE8754 – Team Member

COMMISSIONS OF TRUST AND ROLES IN SCIENTIFIC SOCIETIES

• 2023-2025: delegate of the Italian Society of Mineralogy and Petrology for European Association of Geochemistry
• 2023: Review panel member "Best PhD prize" – Italian Society of Mineralogy and Petrology
• 2022–today: Chair of the Training & Outreach Committee – European Association of Geochemistry
• 2021–2023: Member of the Ethics Committee – Geochemical Society
• 2021–2023: Member of the Ethics Committee – European Association of Geochemistry
• 2021: Review panel member "Premio Angelo Bianchi" – Italian Society of Mineralogy and Petrology
• 2020–2022: Member of the Training & Outreach Committee – European Association of Geochemistry
• 2020-2022: Councillor of the European Association of Geochemistry
• 2018-2021: treasurer of the Italian Society of Mineralogy and Petrology
• 2018–today: Review panel member of the European Research Council
• 2018: Review member: Premio Forcella 2018
• 2016–today: Review panel member: VQR 2011-2014 – ANVUR, VQR 2015-2019 – ANVUR
• 2015–today: Review panel member: NERC Peer Review College – UK Research Council
• 2015–today: Review panel member: Earth and Environmental Sciences PhD program (University of Pavia)
• 2011–today: Review panel member: "Mathematics, Natural sciences and Engineering (division II)" - Swiss National Science Foundation
• 2010–today: Review panel member: "Geochemistry & Petrology Program", Earth Science Division - National Science Foundation

INSTITUTIONAL RESPONSIBILITIES

• Department delegate of the Working group for monitoring and developing the Gender Equality Plan of the University of Milano-Bicocca
• President of the Joint Teaching Staff-Student Committees (CPDS)
• Department delegate of the Interdepartmental Centre for Gender Studies – ABCD
• Member of the academic guidance committee for the degree program in Geological Sciences and Technologies
• Chair of the department Diversity, Equity and Inclusion Committee
• Member of the department Management Board of "Progetti di Eccellenza"

EDITORIAL ACTIVITY

• Editor-in-Chief of **Lithos**
• Guest editor of **Lithos** – special issue: "From the ocean floor to subduction zones and beyond"
• Guest editor of **Solid Earth** – special issue: "Exploring new frontiers in fluids processes in subduction zones"
• Editorial committee of Plinius – Italian supplement of the European Journal of Mineralogy

PEER REVIEW ACTIVITY IN ISI JOURNALS

• ACS Earth and Space Chemistry, American Mineralogist, Chemical Geology, Contributions to Mineralogy and Petrology, Earth and Planetary Science Letters, European Journal of Mineralogy, Geochemistry, Geophysics, Geosystems, Geochimica et Cosmochimica Acta, Geology, Gondwana Research, Journal of Asian Earth Sciences, Journal of Geophysical Research (Solid Earth), Journal of Metamorphic Geology, Journal of Petrology, Journal of the Geological Society, Lithos, Lithosphere, Nature Communications, Nature Geoscience, Science Advances, Scientific Reports, Swiss Journal of Geosciences, Tectonics.

COURSES, LECTURES, INVITED SEMINARS AND SUPERVISION ACTIVITY

• 2023: “I rifiuti inorganici come risorsa” modulo Bbetween Sostenibilità (University of Milano-Bicocca)
• 2022: “Redox processes at subduction zones: the role of intensive and extensive variables during fluid/rock interaction” invited seminar at Institut de Physique du Globe de Paris, France
• 2022: “Redox processes at subduction zones: a micro-scale approach” invited seminar at Goethe Universität Frankfurt Am Main, Germany
• 2020–today: “Deformation and metamorphism at convergent margins” 3 CFU (University of Milano-Bicocca)
• 2019–today: “Principles of Geology – Introduction to Petrography” 6 CFU (University of Milano-Bicocca)
• 2017–today: “Climate Journal Club” 2 CFU (PhD School of University of Milano-Bicocca)
• 2010–today: “Petrography practical sessions” 6 CFU (University of Milano-Bicocca)
• 2017: “Redox processes and the carbon dilemma at the slab-mantle interface” at the Lake Como School of Advanced Studies “Carbon forms, paths and processes in the Earth” Como, Italy.
• 2015: “The subduction factory and the slab-to-mantle element recycling: Information from ultrahigh pressure rocks” invited seminar at Plymouth University, UK.
• 2014–2018: “Petrogenesis and Geodynamics Environments” 4 CFU (University of Milano-Bicocca)
• 2011-2015: “Field Mapping II” 4 CFU (University of Milano-Bicocca)
• 2011: “Electron probe microanalysis: measuring the Fe^{2+}/Fe^{3+} ratio with “flank method” at the Short Course “Advances in electron beam techniques: applications to Geosciences” Geoitalia, Torino, Italy.
• 2009/2010: “Petrography Practical Sessions” 2 CFU (University of Milano)
• 2009/2010: Practical with Perple_X thermodynamic software for the course of Petrology 1CFU (University of Milano)
• Supervisor of 20 bachelor, 12 master and 2 PhD students
• Co-advisor of 3 PhD students

PARTICIPATION TO DOCTORATE COMMITTEE

• 2014-2016: doctorate course in "Chemical, Geological and Environmental Sciences", cycles XXIX-XXXII (University of Milano-Bicocca)
• 2013: doctorate course in "Science", cycle XXXII (University of Milano-Bicocca)
• 2011-2012: doctorate course in "Earth Sciences", cycles XXVII-XXVIII (University of Milano-Bicocca)

KEYNOTES AND INVITED CONTRIBUTIONS AT INTERNATIONAL CONGRESSES

• 2023 invited - A scientific life under ultra-high pressure: tribute to Christian Chopin, Paris (France) “The role of multiphase inclusions as natural microreactors to investigate unusual mineral assemblages at ultrahigh pressure”
• 2018 invited - EGU General Assembly, Wien (Austria) “An integrated petrological and geochemical approach to unravel contrasting P-T-t paths during subduction and exhumation of the Adula Nappe (Central Alps)”
• 2013 keynote - Tectonic Fluxes of Carbon DCO Workshop, San Francisco (USA) “COH fluids and redox processes at subduction zones; field and experimental perspectives”
• 2013 invited - AGU Fall Meeting, San Francisco (USA) “Fluid-mediated redox processes at subduction zones”
• 2013 invited - EGU General Assembly, Wien (Austria) “Fluid-induced oxidation at the slab-mantle interface: insights from UHP garnet peridotites”
• 2012 invited - AGU Fall Meeting, San Francisco (USA) “Oxidation state, Fe3+ distribution and C-O-H metasomatism in the mantle at subuction zones”
• 2012 keynote - EMC2012, Frankfurt (Germany) “C-O-H metasomatism and redox processes in the mantle at subduction zones”
• 2005 invited - AGU Fall Meeting, San Francisco (USA) “Trace element transfer in the mantle wedge: evidence from polyphase inclusions in garnet-pyroxenites (Dabie-Shan, China)”

CONVENER AT INTERNATIONAL CONGRESSES

• 2c – Competing geological processes in carbon and hydrogen storage in the lithosphere and mantle – Goldschmidt, Lyon (France) 2023
• GMPV3.2/GD2.5/TS2.7 – Shaping the lithosphere: fluid-rock interaction, deformation and volatiles cycle – EGU General Assembly, Wien (Austria) 2018
• GMPV3.2 – High-pressure and high-temperature mineral physics: a link between petrology, geophysics and geodynamics – EGU General Assembly, Wien (Austria) 2015

CONVENER AT NATIONAL CONGRESSES

• S42 – Faults and shear zones: the pathways for fluids – Congresso congiunto SGI-SIMP – Geosciences for a sustainable future – Torino (Italy) 2022
• S3 – Exhumation processes – 90° Congresso della Società Geologica Italiana – Geology without borders, Virtual (Italy) 2021
• P7 – New frontiers in metamorphism and deformation-metamorphism relationships through cutting-edge analytical, experimental, numerical, and theoretical techniques – Congresso congiunto SIMP-SGI- SoGeI – Parma (Italy) 2019
• P24 – Natural and model systems to unravel the volatiles cycle in the deep earth – Congresso congiunto SIMP-SGI-AIV-SoGeI – Pisa (Italy) 2017
• P9 – Input and output in subduction settings: chemical and geodynamics implications – 89° Congresso della Società Geologica Italiana, Napoli (Italy) 2016
• S4 – The subduction factory - a key element in the Earth – Congresso congiunto SIMP-AIV-SoGeI-SGI, Firenze (Italy) 2015
• S19 – Fluids in the Earth's crust and Mantle – Congresso congiunto SIMP-SGI, Milano (Italy) 2014

ORGANISATION OF CONGRESSES AND INTERNATIONAL DOCTORATE SCHOOLS

• National congress SIMP-SGI Meeting 2023 "The Geoscience paradigm: resources, risk and future perspectives" - 19-21 September 2023 (Potenza, Italy) – member of the organising committee
• 14th International Eclogite Conference – 10-13 July 2022 (Lyon, France) – member of the scientific committee
• National congress SGI-SIMP Meeting 2022 "Geosciences for a sustainable future" - 19-21 September 2022 (Torino, Italy) – member of the organising committee
• International School on "Mantle Dynamics" – 24-29 October 2021 (Sestri Levante, Italy) – member of the organising and scientific committee
• National congress SIMP-SGI-SOGEI Parma 2019 "Time of planet Earth and human lifespan: geosciences between past and future" - 16-19 September 2019 (Parma, Italy) – member of the organising committee
• National congress SGI-SIMP Catania 2018 "Geosciences for the environment, natural hazard and cultural heritage" - 12-14 September 2018 (Catania, Italy) – member of the organising committee
• EGU Galileo Conference "Exploring new frontiers in fluid processes in subduction zones" - 24-29 June 2018 (Leibnitz, Austria) – member of the organising and scientific committee
• Lake Como School of Advanced Studies "Carbon forms, paths and processes in the Earth" - 15-20 October 2017 (Como, Italy) – member of the organising and scientific committee
• International Winter School "Melting and fluid/melt-rock reactions in the mantle" - 13-17 February 2017 (Pavia, Italy) – member of the organising committee
• Short Course "Microstructures and physico-chemical properties of Earth and planetary materials" - 8-12 February 2010 (Verbania, Italy) – member of the organising committee

PUBLIC ENGAGEMENT

• Responsible and teacher of the course "Inorganic waste as resource" in the frame of the project "Bbetween sustainability" June 2023 – April 2024 (University of Milano-Bicocca, Milano, Italy).
• Teacher of the course "STEM equality and inclusiveness: The role of STEM education in achieving gender equality and inclusiveness" March-May 2023 (Collegio di Milano, Milano, Italy).
• Member of the organising committee of the educational activity "Svelami-B" May-June 2021 and January-February 2023 (Milano-Bicocca, Italy).
• Responsible of the organising committee of the educational activity "Un giorno tra le scienziate in Bicocca" 25-26 February 2021 in the framework of "I Talenti delle Donne" (https://italentidelledonne.comune.milano.it).
• Member of the organising committee of "Scopri le Scienziate" at Meet Me Tonight 2019 (Milano, Italy)
• Member of the organising committee of "On the Rocks – Geological video contest (www.sgi-ontherocks.it; www.youtube.com/channel/UCh5YMmGCZwqeMGwTQXqNP_g; www.instagram.com/ontherocksvideo)
• Responsible of the organising committee of the workshop "Women in Sciences - Le Scienze con la *D* maiuscola" 13-14 May 2019 (https://www.unimib.it/eventi/womeninsciences).
• Participation to EXPO2015 (Milano, Italy), in the framework of Cluster "Isole Mare e Cibo" with the creation of the video "The Earth Breath" (http://www.youtube.com/watch?v=P0njsSLP-Mg&feature=youtu.be)

BIBLIOMETRIC RECORD

• 37 research publications in ISI journals
• >1200 citations
• h-index = 17 (Scopus) – 17 (Web of Science) – 19 (Scholar)
• 1 field guide

List of publications

Cloetingh, S, Sternai, P, Koptev, A, Ehlers, T A., Gerya, T, Kovács, I, Oerlemans, J, Beekman, F, Lavallée, Y, Dingwell, D, Békési, E, Porkolàb, K, Tesauro, M, Lavecchia, A, Botsyun, S, Muller, V, Roure, F, Serpelloni, E, Matenco, L, Castelltort, S, Giovannelli, D, Vitale Brovarone, A, Malaspina, N, Coletti, G, Valla, P, Limberger, J (2023). Coupled surface to deep Earth processes: Perspectives from TOPO-EUROPE with an emphasis on climate- and energy-related societal challenges. GLOBAL AND PLANETARY CHANGE, 226, 104140. doi: 10.1016/j.gloplacha.2023.104140

Malaspina, N., Campione, M., Tumiati, S., Murri, M., Fumagalli, P., Cerantola, V., La Fortezza, M., Scambelluri, M. (2023). Epitactic magnetite growth in fluid inclusions as driving force for olivine oxidation coupled with hydrogen production at high pressure. CHEMICAL GEOLOGY, 629, 121495. doi: 10.1016/j.chemgeo.2023.121495

Di Martino, D, D'Alfonso, L, Malaspina, N, Penati, S (2023). SVELAMI-B Project: Online Physics Activities Within STEM Education. CHALLENGING IN PHYSICS EDUCATION, PartF1979, 199-208. doi: 10.1007/978-3-031-44312-1_15

Malaspina, N, Borghini, G, Zanchetta, S, Pellegrino, L, Corti, M, Tumiati, S (2023). Geochemical evolution of melt/peridotite interaction at high pressure in subduction zones. GEOCHEMICAL PERSPECTIVES LETTERS, 24, 48-52. doi: 10.7185/geochemlet.2305

Campione M, Murri M, Cerantola V, Bessas D, Rosenthal A, Chumakov A, Scambelluri M, Malaspina N* (2022). Magnetic Ordering of Magnetite Inclusions in Olivine at Mantle Depths in Subduction Zones. ACS EARTH AND SPACE CHEMISTRY., 6, 2755-2759. doi: 10.1021/acsearthspacechem.2c00190

Murri M, Capitani G, Fasoli M, Monguzzi A, Calloni A, Bussetti G, Malaspina N, Campione M (2021). Laboratory simulation of space weathering on silicate surfaces in water environment. ACS EARTH AND SPACE CHEMISTRY, 6, 197-206. doi: 10.1021/acsearthspacechem.1c00349

Pellegrino L, Menegon L, Zanchetta S, Langenhorst F, Pollok K, Tumiati S, Malaspina N* (2021). Reaction-induced mantle weakening at high pressure conditions: an example from garnet pyroxenites of Ulten zone (Eastern Alps, N Italy). JOURNAL OF GEOPHYSICAL RESEARCH – SOLID EARTH, 126, e2021JB02258. doi: 10.1029/2021JB022584

Campione, M, La Fortezza, M, Alvaro, M, Scambelluri, M, Malaspina, N* (2020). Commensurate growth of magnetite microinclusions in olivine under mantle conditions. ACS EARTH AND SPACE CHEMISTRY, 4 (6), 825-830, doi: 10.1021/acsearthspacechem.0c00026

Pellegrino L, Malaspina N*, Zanchetta S, Langone A, Tumiati S (2020). High pressure melting of eclogites and metasomatism of garnet peridotites from Monte Duria Area (Central Alps, N Italy): a proxy for melt-rock reaction during subduction. LITHOS, vol. 358-59, 105391, ISSN: 0024-4937 doi: 10.1016/j.lithos.2020.105391

Tumiati, S, Malaspina, N* (2019). Redox processes and the role of carbon-bearing volatiles from the slab–mantle interface to the mantle wedge. JOURNAL OF THE GEOLOGICAL SOCIETY, vol. 176, p. 388-397 ISSN: 0016-7649, doi: 10.1144/jgs2018-046

Zanchetta, S, Malaspina, N, Zanchi, A, Benciolini, L, Martin, S, Javadi, H, Kouhpeyma, M (2018). Contrasting subduction–exhumation paths in the blueschists of the Anarak Metamorphic Complex (Central Iran). GEOLOGICAL MAGAZINE, vol. 155, p. 316-334, ISSN: 0016-7568, doi: 10.1017/S0016756817000218

Cannaò, E, Malaspina, N (2018). From oceanic to continental subduction: Implications for the geochemical and redox evolution of the supra-subduction mantle. GEOSPHERE, vol. 14, p. 2311-2336, ISSN: 1553-040X, doi: 10.1130/GES01597.1

Tumiati,S, Zanchetta,S, Pellegrino,L, Ferrario, C, Casartelli,S, Malaspina, N (2018). Granulite facies overprint in garnet peridotites and kyanite eclogites of Monte Duria (Central Alps, Italy): clues from srilankite-

and sapphirine-bearing symplectites. JOURNAL OF PETROLOGY, vol. 59, p. 115-152, ISSN: 0022-3530, doi: 10.1093/petrology/egy021

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