Andrea Tommasi

List of Publications by Year
in descending order

122	6,244	50276	74163
papers	citations	46 h-index	75 g-index

131	131	131	3493
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Interplay between melt infiltration and deformation in the deep lithospheric mantle (External Liguride) Tj ETQq1 1 0.784314 rgBT /Ov	1.4	6
2	Strain Localization in the Root of Detachment Faults at a Meltâ€Starved Midâ€Ocean Ridge: A Microstructural Study of Abyssal Peridotites From the Southwest Indian Ridge. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009434.	2.5	14
3	Dynamic recrystallization by subgrain rotation in olivine revealed by electron backscatter diffraction. Tectonophysics, 2021, 815, 228916.	2.2	9
4	Deformation of upper mantle rocks with contrasting initial fabrics in axial extension. Tectonophysics, 2021, 815, 228997.	2.2	2
5	Microstructure and seismic properties of amphibole-rich rocks from the deep crust in southern Tibet. Tectonophysics, 2021, 811, 228869.	2.2	8
6	The SÃ£o Francisco cratonic root beneath the Neoproterozoic Brasilia belt (Brazil): Petrophysical data from kimberlite xenoliths. Tectonophysics, 2021, 816, 229011.	2.2	5
7	From dry to damp and stiff mantle lithosphere by reactive melt percolation atop the Hawaiian plume. Earth and Planetary Science Letters, 2021, 574, 117159.	4.4	3
8	The Borborema Strike-Slip Shear Zone System (NE Brazil): Large-Scale Intracontinental Strain Localization in a Heterogeneous Plate. Lithosphere, 2021, 2021, .	1.4	17
9	Olivine-induced viscous anisotropy in fossil strike-slip mantle shear zones and associated strain localization in the crust. Geophysical Journal International, 2020, 224, 608-625.	2.4	5
10	Textural and Compositional Changes in the Lithospheric Mantle Atop the Hawaiian Plume: Consequences for Seismic Properties. Geochemistry, Geophysics, Geosystems, 2020, 21, e2020GC009138.	2.5	9
11	On the role of solute drag in reconciling laboratory and natural constraints on olivine grain growth kinetics. Geophysical Journal International, 2020, 224, 1360-1370.	2.4	8
12	Dislocation-driven recrystallization in AZ31B magnesium alloy imaged by quasi-in situ EBSD in annealing experiments. Materials Characterization, 2020, 165, 110382.	4.4	26
13	Porphyroclasts: Source and Sink of Major and Trace Elements During Deformation-Induced Metasomatism (Finero, Ivrea-Verbano Zone, Italy). Geosciences (Switzerland), 2020, 10, 196.	2.2	7
14	Using thermo-mechanical models of subduction to constrain effective mantle viscosity. Earth and Planetary Science Letters, 2020, 539, 116243.	4.4	8
15	Anhydrous Phase B: Transmission Electron Microscope Characterization and Elastic Properties. Geochemistry, Geophysics, Geosystems, 2019, 20, 4059-4072.	2.5	1
16	Recrystallization processes, microstructure and crystallographic preferred orientation evolution in polycrystalline ice during high-temperature simple shear. Cryosphere, 2019, 13, 1495-1511.	3.9	22
17	Lateral and Vertical Heterogeneity in the Lithospheric Mantle at the Northern Margin of the Pannonian Basin Reconstructed From Peridotite Xenolith Microstructures. Journal of Geophysical Research: Solid Earth, 2019, 124, 6315-6336.	3.4	12
18	Crust-mantle coupling during continental convergence and break-up: Constraints from peridotite xenoliths from the Borborema Province, northeast Brazil. Tectonophysics, 2019, 766, 249-269.	2.2	13

#	Article	IF	Citations
19	Deformation, Annealing, Meltâ€Rock Interaction, and Seismic Properties of an Old Domain of the Equatorial Atlantic Lithospheric Mantle. Tectonics, 2019, 38, 1164-1188.	2.8	15
20	Interplay between Fluid Extraction Mechanisms and Antigorite Dehydration Reactions (Val Malenco,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.8	14
21	Predicting viscoplastic anisotropy in the upper mantle: a comparison between experiments and polycrystal plasticity models. Physics of the Earth and Planetary Interiors, 2019, 286, 69-80.	1.9	10
22	Microstructures, Water Contents, and Seismic Properties of the Mantle Lithosphere Beneath the Northern Limit of the Hangay Dome, Mongolia. Geochemistry, Geophysics, Geosystems, 2019, 20, 183-207.	2.5	14
23	Dislocation dynamics modelling of the power-law breakdown in olivine single crystals: Toward a unified creep law for the upper mantle. Earth and Planetary Science Letters, 2019, 506, 282-291.	4.4	22
24	Non-hydrostatic stress field orientation inferred from orthopyroxene (Pbca) to low-clinoenstatite (P21/c) inversion in partially dehydrated serpentinites. American Mineralogist, 2018, 103, 993-1001.	1.9	9
25	Deformation, crystal preferred orientations, and seismic anisotropy in the Earth's Dâ€³ layer. Earth and Planetary Science Letters, 2018, 492, 35-46.	4.4	15
26	Investigation of nucleation processes during dynamic recrystallization of ice using cryo-EBSD. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20150345.	3.4	16
27	Crystallographic Texture Evolution of a Zinc Sheet Subjected to Different Strain Paths. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 2858-2867.	2.2	12
28	Microstructural evolution during thermal annealing of ice-Ih. Journal of Structural Geology, 2017, 99, 31-44.	2.3	10
29	Hydrous melts weaken the mantle, crystallization of pargasite and phlogopite does not: Insights from a petrostructural study of the Finero peridotites, southern Alps. Earth and Planetary Science Letters, 2017, 477, 59-72.	4.4	32
30	Fluidâ€Enhanced Annealing in the Subcontinental Lithospheric Mantle Beneath the Westernmost Margin of the Carpathianâ€Pannonian Extensional Basin System. Tectonics, 2017, 36, 2987-3011.	2.8	20
31	Non-basal dislocations should be accounted for in simulating ice mass flow. Earth and Planetary Science Letters, 2017, 473, 247-255.	4.4	20
32	Flow in the western Mediterranean shallow mantle: Insights from xenoliths in Pliocene alkali basalts from SE Iberia (eastern Betics, Spain). Tectonics, 2016, 35, 2657-2676.	2.8	10
33	Metasomatized Mantle Xenoliths as a Record of the Lithospheric Mantle Evolution of the Northern Edge of the Ahaggar Swell, In Teria (Algeria). Journal of Petrology, 2016, 57, 345-382.	2.8	21
34	Fluid-assisted strain localization in the shallow subcontinental lithospheric mantle. Lithos, 2016, 262, 636-650.	1.4	38
35	Refertilization Processes in the Subcontinental Lithospheric Mantle: the Record of the Beni Bousera Orogenic Peridotite (Rif Belt, Northern Morocco). Journal of Petrology, 2016, 57, 2251-2270.	2.8	15
36	Deformation, annealing, reactive melt percolation, and seismic anisotropy in the lithospheric mantle beneath the southeastern Ethiopian rift: Constraints from mantle xenoliths from Mega. Tectonophysics, 2016, 682, 186-205.	2.2	18

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37	How partial melting affects smallâ€scale convection in a plumeâ€fed sublithospheric layer beneath fastâ€moving plates. Geochemistry, Geophysics, Geosystems, 2015, 16, 3924-3945.	2.5	6
38	Analysis of Dynamic Recrystallization of Ice from EBSD Orientation Mapping. Frontiers in Earth Science, 2015, 3, .	1.8	33
39	Low steady-state stresses in the cold lithospheric mantle inferred from dislocation dynamics models of dislocation creep in olivine. Earth and Planetary Science Letters, 2015, 432, 232-242.	4.4	26
40	Characterization of the sub-continental lithospheric mantle beneath the Cameroon volcanic line inferred from alkaline basalt hosted peridotite xenoliths from Barombi Mbo and Nyos Lakes. Journal of African Earth Sciences, 2015, 111, 170-193.	2.0	28
41	On topotaxy and compaction during antigorite and chlorite dehydration: an experimental and natural study. Contributions To Mineralogy and Petrology, 2015, 169, 1.	3.1	26
42	Modeling the effect of subgrain rotation recrystallization on the evolution of olivine crystal preferred orientations in simple shear. Earth and Planetary Science Letters, 2015, 430, 356-366.	4.4	27
43	Heterogeneity and anisotropy in the lithospheric mantle. Tectonophysics, 2015, 661, 11-37.	2.2	89
44	Deformation, hydration, and anisotropy of the lithospheric mantle in an active rift: Constraints from mantle xenoliths from the North Tanzanian Divergence of the East African Rift. Tectonophysics, 2015, 639, 34-55.	2.2	40
45	Characterization of hydration in the mantle lithosphere: Peridotite xenoliths from the Ontong Java Plateau as an example. Lithos, 2015, 212-215, 189-201.	1.4	56
46	Petrophysical constraints on the seismic properties of the Kaapvaal craton mantle root. Solid Earth, 2014, 5, 45-63.	2.8	23
47	Deformation in a partially molten mantle: Constraints from plagioclase lherzolites from Lanzo, western Alps. Tectonophysics, 2014, 615-616, 167-181.	2.2	38
48	The Beni Bousera Peridotite (Rif Belt, Morocco): an Oblique-slip Low-angle Shear Zone Thinning the Subcontinental Mantle Lithosphere. Journal of Petrology, 2014, 55, 283-313.	2.8	58
49	Viscoplasticity of polycrystalline olivine experimentally deformed at high pressure and 900Â°C. Tectonophysics, 2014, 623, 123-135.	2.2	47
50	Microstructures and seismic properties of south Patagonian mantle xenoliths (Gobernador Gregores) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.2	34
51	Microstructures, composition, and seismic properties of the <scp>O</scp>ntong <scp>J</scp>ava <scp>P</scp>lateau mantle root. Geochemistry, Geophysics, Geosystems, 2014, 15, 4547-4569.	2.5	30
52	Development of texture and seismic anisotropy during the onset of subduction. Geochemistry, Geophysics, Geosystems, 2014, 15, 192-212.	2.5	36
53	Melt-rock interactions, deformation, hydration and seismic properties in the sub-arc lithospheric mantle inferred from xenoliths from seamounts near Lihir, Papua New Guinea. Tectonophysics, 2013, 608, 330-345.	2.2	44
54	Low strength of Earthâ€™s uppermost mantle inferred from tri-axial deformation experiments on dry olivine crystals. Physics of the Earth and Planetary Interiors, 2013, 220, 37-49.	1.9	93

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55	Strain Localization in Pyroxenite by Reaction-Enhanced Softening in the Shallow Subcontinental Lithospheric Mantle. Journal of Petrology, 2013, 54, 1997-2031.	2.8	29
56	Small-scale convection in a plume-fed low-viscosity layer beneath a moving plate. Geophysical Journal International, 2013, 194, 591-610.	2.4	22
57	Numerical modelling of the upper-mantle anisotropy beneath a migrating strike-slip plate boundary: the San Andreas Fault system. Geophysical Journal International, 2012, 191, 436-458.	2.4	17
58	Deformation of olivine in torsion under hydrous conditions. Physics of the Earth and Planetary Interiors, 2012, 202-203, 56-70.	1.9	68
59	Plastic deformation and development of antigorite crystal preferred orientation in high-pressure serpentinites. Earth and Planetary Science Letters, 2012, 349-350, 75-86.	4.4	58
60	Feedbacks between deformation and melt distribution in the crustâ€“mantle transition zone of the Oman ophiolite. Earth and Planetary Science Letters, 2012, 359-360, 61-72.	4.4	60
61	Deformation and hydration of the lithospheric mantle beneath the Kaapvaal craton, South Africa. Lithos, 2012, 149, 31-50.	1.4	88
62	Deformation processes and rheology of pyroxenites under lithospheric mantle conditions. Journal of Structural Geology, 2012, 39, 138-157.	2.3	41
63	Faults (shear zones) in the Earth's mantle. Tectonophysics, 2012, 558-559, 1-27.	2.2	136
64	Anatomy of an extensional shear zone in the mantle, Lanzo massif, Italy. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	2.5	49
65	Forsterite to wadsleyite phase transformation under shear stress and consequences for the Earth's mantle transition zone. Physics of the Earth and Planetary Interiors, 2011, 184, 91-104.	1.9	38
66	Composition, textures, seismic and thermal anisotropies of xenoliths from a thin and hot lithospheric mantle (Summit Lake, southern Canadian Cordillera). Tectonophysics, 2011, 507, 1-15.	2.2	22
67	The effect of dynamic recrystallization on olivine crystal preferred orientations in mantle xenoliths deformed under varied stress conditions. Journal of Structural Geology, 2011, 33, 1528-1540.	2.3	52
68	Deformation and Fluid-Rock Interaction in the Supra-subduction Mantle: Microstructures and Water Contents in Peridotite Xenoliths from the Avacha Volcano, Kamchatka. Journal of Petrology, 2010, 51, 363-394.	2.8	150
69	Olivine, and the Origin of Kimberlite. Journal of Petrology, 2010, 51, 573-602.	2.8	157
70	Shallow Mantle Composition and Dynamics: Fifth International Orogenic Lherzolite Conference: Foreword. Journal of Petrology, 2010, 51, 3-7.	2.8	0
71	Seismic properties of the supraâ€subduction mantle: Constraints from peridotite xenoliths from the Avacha volcano, southern Kamchatka. Geophysical Research Letters, 2010, 37, .	4.0	19
72	Fluid transfer into the wedge controlled by high-pressure hydrofracturing in the cold top-slab mantle. Earth and Planetary Science Letters, 2010, 297, 271-286.	4.4	62

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73	Deformation and Reactive Melt Transport in the Mantle Lithosphere above a Large-scale Partial Melting Domain: the Ronda Peridotite Massif, Southern Spain. Journal of Petrology, 2009, 50, 1235-1266.	2.8	102
74	Structural reactivation in plate tectonics controlled by olivine crystal anisotropy. Nature Geoscience, 2009, 2, 423-427.	12.9	111
75	A multiscale approach to model the anisotropic deformation of lithospheric plates. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	26
76	Oriented growth of garnet by topotactic reactions and epitaxy in highâ€pressure, mafic garnet granulite formed by dehydration melting of metastable hornblendeâ€gabbronorite (Jijal Complex,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.4	22
77	Predicted glide systems and crystal preferred orientations of polycrystalline silicate Mg-Perovskite at high pressure: Implications for the seismic anisotropy in the lower mantle. Earth and Planetary Science Letters, 2008, 271, 135-144.	4.4	66
78	Deformation, static recrystallization, and reactive melt transport in shallow subcontinental mantle xenoliths (Tok Cenozoic volcanic field, SE Siberia). Earth and Planetary Science Letters, 2008, 272, 65-77.	4.4	104
79	Deformation and seismic anisotropy of the lithospheric mantle in the southeastern Carpathians inferred from the study of mantle xenoliths. Earth and Planetary Science Letters, 2008, 272, 50-64.	4.4	70
80	Intraplate continental deformation: Influence of a heat-producing layer in the lithospheric mantle. Earth and Planetary Science Letters, 2008, 274, 392-400.	4.4	32
81	Feedback between melt percolation and deformation in an exhumed lithosphereâ€“asthenosphere boundary. Earth and Planetary Science Letters, 2008, 274, 401-413.	4.4	88
82	Comment on the article â€œProbability of radial anisotropy in the deep mantleâ€•by Visser et al. (2008) EPSL 270:241â€“250. Earth and Planetary Science Letters, 2008, 276, 223-225.	4.4	5
83	The Lherz spinel lherzolite: Refertilized rather than pristine mantle. Earth and Planetary Science Letters, 2007, 259, 599-612.	4.4	305
84	Modeling strain and anisotropy along the Alpine Fault, South Island, New Zealand. Geophysical Monograph Series, 2007, , 289-305.	0.1	5
85	Upper-mantle flow beneath French Polynesia from shear wave splitting. Geophysical Journal International, 2007, 170, 1262-1288.	2.4	59
86	Deformation of a pervasively molten middle crust: insights from the neoproterozoic Ribeiraâ€AraÃ§uaÃ-orogen (SE Brazil). Terra Nova, 2007, 19, 278-286.	2.1	50
87	Plume-lithosphere interaction beneath a fast moving plate. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	28
88	Deformation and melt transport in a highly depleted peridotite massif from the Canadian Cordillera: Implications to seismic anisotropy above subduction zones. Earth and Planetary Science Letters, 2006, 252, 245-259.	4.4	60
89	Flow and electrical anisotropy in the upper mantle: Finite-element models constraints on the effects of olivine crystal preferred orientation and microstructure. Physics of the Earth and Planetary Interiors, 2006, 158, 92-106.	1.9	22
90	Erratum to Eur. J. Mineral., 18, 149-160.. European Journal of Mineralogy, 2006, 18, 665-665.	1.3	1

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91	Slip systems and plastic shear anisotropy in Mg2SiO4 ringwoodite: insights from numerical modelling. European Journal of Mineralogy, 2006, 18, 149-160.	1.3	49
92	Hydrogen diffusivity and electrical anisotropy of a peridotite mantle. Geophysical Journal International, 2005, 160, 1092-1102.	2.4	47
93	Mantle tectonics beneath New Zealand inferred fromSKSsplitting and petrophysics. Geophysical Journal International, 2005, 163, 760-774.	2.4	24
94	Pressure sensitivity of olivine slip systems and seismic anisotropy of Earth's upper mantle. Nature, 2005, 433, 731-733.	27.8	242
95	Thermal diffusivity of olivine single crystals and a dunite at high temperature: Evidence for heat transfer by radiation in the upper mantle. Physics of the Earth and Planetary Interiors, 2005, 151, 129-141.	1.9	36
96	Correction to â€œStrain-induced seismic anisotropy of wadsleyite polycrystals and flow patterns in the mantle transition zoneâ€. Journal of Geophysical Research, 2005, 110, .	3.3	1
97	Mantle-driven deformation of orogenic zones and clutch tectonics. Geological Society Special Publication, 2004, 227, 41-64.	1.3	18
98	Crystal preferred orientations of garnet: comparison between numerical simulations and electron back-scattered diffraction (EBSD) measurements in naturally deformed eclogites. Journal of Structural Geology, 2004, 26, 2089-2102.	2.3	82
99	Strain-induced seismic anisotropy of wadsleyite polycrystals and flow patterns in the mantle transition zone. Journal of Geophysical Research, 2004, 109, .	3.3	59
100	Seismic anisotropy and compositionally induced velocity anomalies in the lithosphere above mantle plumes: a petrological and microstructural study of mantle xenoliths from French Polynesia. Earth and Planetary Science Letters, 2004, 227, 539-556.	4.4	89
101	Thermal diffusivity of upper mantle rocks: Influence of temperature, pressure, and the deformation fabric. Journal of Geophysical Research, 2003, 108, .	3.3	63
102	Thermal diffusivity of olivine single-crystals and polycrystalline aggregates at ambient conditions-a comparison. Geophysical Research Letters, 2003, 30, .	4.0	19
103	Wrench faults down to the asthenosphere: geological and geophysical evidence and thermomechanical effects. Geological Society Special Publication, 2003, 210, 15-34.	1.3	47
104	PLUME investigates South Pacific Superswell. Eos, 2002, 83, 511.	0.1	27
105	Plastic deformation and development of clinopyroxene lattice preferred orientations in eclogites. Journal of Structural Geology, 2002, 24, 1357-1368.	2.3	118
106	Continental rifting parallel to ancient collisional belts: an effect of the mechanical anisotropy of the lithospheric mantle. Earth and Planetary Science Letters, 2001, 185, 199-210.	4.4	209
107	Anisotropy of thermal diffusivity in the upper mantle. Nature, 2001, 411, 783-786.	27.8	63
108	Predicting the seismic implications of salt anisotropy using numerical simulations of halite deformation. Geophysics, 2000, 65, 1272-1280.	2.6	17

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109	Upper mantle deformation and seismic anisotropy in continental rifts. Physics and Chemistry of the Earth, 2000, 25, 111-117.	0.6	71
110	Viscoplastic self-consistent and equilibrium-based modeling of olivine lattice preferred orientations: Implications for the upper mantle seismic anisotropy. Journal of Geophysical Research, 2000, 105, 7893-7908.	3.3	310
111	Upper mantle tectonics: three-dimensional deformation, olivine crystallographic fabrics and seismic properties. Earth and Planetary Science Letters, 1999, 168, 173-186.	4.4	210
112	Numerical simulations of depth-dependent anisotropy and frequency-dependent wave propagation effects. Journal of Geophysical Research, 1999, 104, 23141-23153.	3.3	48
113	Rheological heterogeneity, mechanical anisotropy and deformation of the continental lithosphere. Tectonophysics, 1998, 296, 61-86.	2.2	141
114	Forward modeling of the development of seismic anisotropy in the upper mantle. Earth and Planetary Science Letters, 1998, 160, 1-13.	4.4	132
115	Continental-scale rheological heterogeneities and complex intraplate tectono-metamorphic patterns: insights from a case-study and numerical models. Tectonophysics, 1997, 279, 327-350.	2.2	44
116	Why do continents break-up parallel to ancient orogenic belts?. Terra Nova, 1997, 9, 62-66.	2.1	146
117	Seismic anisotropy in ocean basins: Resistive drag of the sublithospheric mantle?. Geophysical Research Letters, 1996, 23, 2991-2994.	4.0	44
118	Initiation and propagation of shear zones in a heterogeneous continental lithosphere. Journal of Geophysical Research, 1995, 100, 22083-22101.	3.3	62
119	Self-indentation of a heterogeneous continental lithosphere. Geology, 1994, 22, 967.	4.4	75
120	Magma-assisted strain localization in an orogen-parallel transcurrent shear zone of southern Brazil. Tectonics, 1994, 13, 421-437.	2.8	135
121	Deformation patterns in the southern Brazilian branch of the Dom Feliciano Belt: A reappraisal. Journal of South American Earth Sciences, 1992, 5, 77-96.	1.4	149
122	An effective parameterization of texture-induced viscous anisotropy in orthotropic materials with application for modeling geodynamical flows. , 0, , .		1