Paul Raterron

List of Publications by Year
in descending order

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34 papers	1,159 citations	430874 18 h-index	377865 34 g-index
34 all docs	34 docs citations	34 times ranked	880 citing authors

#	Article	IF	Citations
1	New experimental observations on the anhydrous solidus for peridotite KLB-1. Geochemistry, Geophysics, Geosystems, 2000, 1, n/a-n/a.	2.5	132
2	Pressure-induced slip-system transition in forsterite: Single-crystal rheological properties at mantle pressure and temperature. American Mineralogist, 2007, 92, 1436-1445.	1.9	98
3	Low-temperature olivine rheology at high pressure. Physics of the Earth and Planetary Interiors, 2004, 145, 149-159.	1.9	88
4	Experimental deformation of olivine single crystals at mantle pressures and temperatures. Physics of the Earth and Planetary Interiors, 2009, 172, 74-83.	1.9	85
5	Olivine flow mechanisms at 8 GPa. Physics of the Earth and Planetary Interiors, 2003, 138, 113-129.	1.9	61
6	Deformation of olivine at mantle pressure using the D-DIA. European Journal of Mineralogy, 2006, 18, 7-19.	1.3	60
7	Highâ€temperature deformation of diopside single crystal: 1. Mechanical data. Journal of Geophysical Research, 1991, 96, 14277-14286.	3.3	59
8	Stress measurements of deforming olivine at high pressure. Physics of the Earth and Planetary Interiors, 2004, 143-144, 357-367.	1.9	58
9	Hydrolytic weakening of olivine at mantle pressure: Evidence of [100](010) slip system softening from single-crystal deformation experiments. Physics of the Earth and Planetary Interiors, 2013, 216, 12-20.	1.9	52
10	Observation of Cation Reordering during the Olivine-Spinel Transition in Fayalite byIn SituSynchrotron X-Ray Diffraction at High Pressure and Temperature. Physical Review Letters, 2001, 86, 4072-4075.	7.8	41
11	High-temperature deformation of diopside crystal: 3. Influences ofpO2and SiO2precipitation. Journal of Geophysical Research, 1994, 99, 9423-9439.	3.3	39
12	Pressure effect on forsterite dislocation slip systems: Implications for upper-mantle LPO and low viscosity zone. Physics of the Earth and Planetary Interiors, 2011, 188, 26-36.	1.9	39
13	Axial temperature gradient and stress measurements in the deformation-DIA cell using alumina pistons. Review of Scientific Instruments, 2013, 84, 043906.	1.3	39
14	Activities of olivine slip systems in the upper mantle. Physics of the Earth and Planetary Interiors, 2012, 200-201, 105-112.	1.9	34
15	Deformation of periclase single crystals at high pressure and temperature: Quantification of the effect of pressure on slip-system activities. Journal of Applied Physics, 2012, 111, .	2.5	30
16	Microstructures and rheology of the Earth's upper mantle inferred from a multiscale approach. Comptes Rendus Physique, 2010, 11, 304-315.	0.9	26
17	In siturheological measurements at extreme pressure and temperature using synchrotron X-ray diffraction and radiography. Journal of Synchrotron Radiation, 2009, 16, 748-756.	2.4	25
18	Deformation of diopside single crystal at mantle pressure. 1: Mechanical data. Physics of the Earth and Planetary Interiors, 2009, 177, 122-129.	1.9	20

#	Article	IF	Citations
19	Early partial melting in the upper mantle: an A.E.M. study of a lherzolite experimentally annealed at hypersolidus conditions. Tectonophysics, 1997, 279, 79-91.	2.2	18
20	Early partial melting of diopside under high pressure. Physics of the Earth and Planetary Interiors, 1995, 89, 77-88.	1.9	17
21	In situquantitative analysis of stress and texture development in forsterite aggregates deformed at 6â€…GPa and 1373â€…K. Journal of Applied Crystallography, 2012, 45, 263-271.	4.5	15
22	Multiscale modeling of upper mantle plasticity: From single-crystal rheology to multiphase aggregate deformation. Physics of the Earth and Planetary Interiors, 2014, 228, 232-243.	1.9	15
23	Deformation of forsterite polycrystals at mantle pressure: Comparison with Fe-bearing olivine and the effect of iron on its plasticity. Physics of the Earth and Planetary Interiors, 2015, 240, 95-104.	1.9	15
24	Strength of orthoenstatite single crystals at mantle pressure and temperature and comparison with olivine. Earth and Planetary Science Letters, 2016, 450, 326-336.	4.4	15
25	Deformation of single crystal sample using D-DIA apparatus coupled with synchrotron X-rays: In situ stress and strain measurements at high pressure and temperature. Journal of Physics and Chemistry of Solids, 2010, 71, 1053-1058.	4.0	13
26	Polycrystalline olivine rheology in dislocation creep: Revisiting experimental data to 8.1GPa. Physics of the Earth and Planetary Interiors, 2014, 228, 211-219.	1.9	13
27	A process for low-temperature olivine-spinel transition under quasi-hydrostatic stress. Geophysical Research Letters, 2002, 29, 36-1-36-4.	4.0	11
28	Deformation of diopside single crystals at mantle pressure. TEM characterization of dislocation microstructures. European Journal of Mineralogy, 2010, 22, 181-187.	1.3	10
29	Sillimanite mullitization: Atem investigation and point defect model. Phase Transitions, 1999, 68, 481-500.	1.3	9
30	The Effect of Pressure and Mgâ€Content on Ilmenite Rheology: Implications for Lunar Cumulate Mantle Overturn. Journal of Geophysical Research E: Planets, 2021, 126, .	3.6	9
31	SiO2 precipitation in olivine: ATEM investigation of two dunites annealed at 300 MPa in hydrous conditions. Earth and Planetary Science Letters, 2000, 180, 415-423.	4.4	7
32	Textures in deforming forsterite aggregates up to 8ÂGPa and 1673ÂK. Physics and Chemistry of Minerals, 2016, 43, 409-417.	0.8	2
33	Pressure Dependence of Magnesite Creep. Geosciences (Switzerland), 2019, 9, 420.	2.2	2
34	Olivine intergranular plasticity at mantle pressures and temperatures. Comptes Rendus - Geoscience, 2019, 351, 80-85.	1.2	2