Dipta B Ghosh

List of Publications by Year
in descending order

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20 papers	453 citations	687363 13 h-index	752698 20 g-index
20 all docs	20 docs citations	20 times ranked	491 citing authors

#	Article	IF	Citations
1	Structure and density of basaltic melts at mantle conditions from first-principles simulations. Nature Communications, 2015, 6, 8578.	12.8	76
2	First-principles molecular dynamics simulations of MgSiO3 glass: Structure, density, and elasticity at high pressure. American Mineralogist, 2014, 99, 1304-1314.	1.9	62
3	A magma ocean origin to divergent redox evolutions of rocky planetary bodies and early atmospheres. Nature Communications, 2020, 11, 2007.	12.8	44
4	Diffusion and viscosity of Mg2SiO4 liquid at high pressure from first-principles simulations. Geochimica Et Cosmochimica Acta, 2011, 75, 4591-4600.	3.9	41
5	Carbon-bearing silicate melt at deep mantle conditions. Scientific Reports, 2017, 7, 848.	3.3	30
6	First-principles simulations of CaO and CaSiO3 liquids: structure, thermodynamics and diffusion. Physics and Chemistry of Minerals, 2015, 42, 393-404.	0.8	29
7	Transport properties of carbonated silicate melt at high pressure. Science Advances, 2017, 3, e1701840.	10.3	28
8	Densityâ€Pressure Profiles of Feâ€Bearing MgSiO₃ Liquid: Effects of Valence and Spin States, and Implications for the Chemical Evolution of the Lower Mantle. Geophysical Research Letters, 2018, 45, 3959-3966.	4.0	22
9	First-principles molecular dynamics simulations of anorthite (CaAl2Si2O8) glass at high pressure. Physics and Chemistry of Minerals, 2018, 45, 575-587.	0.8	20
10	Solid-liquid density and spin crossovers in (Mg, Fe)O system at deep mantle conditions. Scientific Reports, 2016, 6, 37269.	3.3	17
11	First principles simulations of the stability and structure of grain boundaries in Mg2SiO4 forsterite. Physics and Chemistry of Minerals, 2014, 41, 163-171.	0.8	13
12	First-principles prediction of pressure-enhanced defect segregation and migration at MgO grain boundaries. American Mineralogist, 2015, 100, 1053-1058.	1.9	13
13	Behavior and properties of water in silicate melts under deep mantle conditions. Scientific Reports, 2021, 11, 10588.	3.3	13
14	Deep neural network potentials for diffusional lithium isotope fractionation in silicate melts. Geochimica Et Cosmochimica Acta, 2021, 303, 38-50.	3.9	11
15	Nitrogen Content in the Earth's Outer Core. Geophysical Research Letters, 2019, 46, 89-98.	4.0	10
16	Effects of valence and spin of Fe in MgSiO3 melts: Structural insights from first-principles molecular dynamics simulations. Geochimica Et Cosmochimica Acta, 2020, 279, 107-118.	3.9	8
17	Anomalous Behavior of Viscosity and Electrical Conductivity of MgSiO₃ Melt at Mantle Conditions. Geophysical Research Letters, 2021, 48, e2021GL093573.	4.0	7
18	Firstâ€Principles Study of FeO 2 H x Solid and Melt System at High Pressures: Implications for Ultralowâ€Velocity Zones. Journal of Geophysical Research: Solid Earth, 2019, 124, 4566-4575.	3.4	6

#	Article	IF	Citations
19	Thermodynamics, structure, and transport properties of the MgOâ€“Al2O3 liquid system. Physics and Chemistry of Minerals, 2019, 46, 501-512.	0.8	2
20	Hydration-driven stabilization and volume collapse of grain boundaries in Mg2SiO4 forsterite predicted by first-principles simulations. American Mineralogist, 2021, , .	1.9	1