Lidong Dai

List of Publications by Year
in descending order

83 papers	1,709 citations	304602 22 h-index	345118 36 g-index
86 all docs	86 docs citations	86 times ranked	831 citing authors

#	Article	IF	Citations
1	Electrical conductivity of orthopyroxene: Implications for the water content of the asthenosphere. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2009, 85, 466-475.	1.6	115
2	Electrical conductivity of pyrope-rich garnet at high temperature and high pressure. Physics of the Earth and Planetary Interiors, 2009, 176, 83-88.	0.7	100
3	Electrical conductivity of wadsleyite at high temperatures and high pressures. Earth and Planetary Science Letters, 2009, 287, 277-283.	1.8	99
4	High and highly anisotropic electrical conductivity of the asthenosphere due to hydrogen diffusion in olivine. Earth and Planetary Science Letters, 2014, 408, 79-86.	1.8	91
5	Effect of dehydrogenation on the electrical conductivity of Fe-bearing amphibole: Implications for high conductivity anomalies in subduction zones and continental crust. Earth and Planetary Science Letters, 2018, 498, 27-37.	1.8	55
6	Comments on â€œElectrical conductivity of wadsleyite as a function of temperature and water contentâ€• by Manthilake et al.. Physics of the Earth and Planetary Interiors, 2009, 174, 19-21.	0.7	51
7	The effect of chemical composition and oxygen fugacity on the electrical conductivity of dry and hydrous garnet at high temperatures and pressures. Contributions To Mineralogy and Petrology, 2012, 163, 689-700.	1.2	50
8	Influence of dehydration on the electrical conductivity of epidote and implications for highâ€conductivity anomalies in subduction zones. Journal of Geophysical Research: Solid Earth, 2017, 122, 2751-2762.	1.4	45
9	Pressure-induced permanent metallization with reversible structural transition in molybdenum disulfide. Applied Physics Letters, 2017, 110, .	1.5	45
10	Pressure-induced irreversible metallization accompanying the phase transitions in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">S</mml:mi><mml:msub><mml:mi mathvariant="normal">b</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2018, 97, .	1.1	45
11	Experimental study of grain boundary electrical conductivities of dry synthetic peridotite under highâ€temperature, highâ€pressure, and different oxygen fugacity conditions. Journal of Geophysical Research, 2008, 113, .	3.3	40
12	The effect of pressure on the electrical conductivity of olivine under the hydrogen-rich conditions. Physics of the Earth and Planetary Interiors, 2014, 232, 51-56.	0.7	39
13	Electrical conductivity of alkali feldspar solid solutions at high temperatures and high pressures. Physics and Chemistry of Minerals, 2013, 40, 51-62.	0.3	38
14	The electrical conductivity of dry polycrystalline olivine compacts at high temperatures and pressures. Mineralogical Magazine, 2010, 74, 849-857.	0.6	36
15	Influence of oxygen fugacity on the electrical conductivity of hydrous olivine: Implications for the mechanism of conduction. Physics of the Earth and Planetary Interiors, 2014, 232, 57-60.	0.7	35
16	Influence of FeO and H on the electrical conductivity of olivine. Physics of the Earth and Planetary Interiors, 2014, 237, 73-79.	0.7	35
17	Influence of temperature, pressure, and oxygen fugacity on the electrical conductivity of dry eclogite, and geophysical implications. Geochemistry, Geophysics, Geosystems, 2016, 17, 2394-2407.	1.0	35
18	Pressure-induced irreversible amorphization and metallization with a structural phase transition in arsenic telluride. Journal of Materials Chemistry C, 2017, 5, 12157-12162.	2.7	35

#	Article	IF	Citations
19	Electrical conductivity of albite at high temperatures and high pressures. American Mineralogist, 2011, 96, 1821-1827.	0.9	29
20	Influence of temperature, pressure, and chemical composition on the electrical conductivity of granite. American Mineralogist, 2014, 99, 1420-1428.	0.9	29
21	Electrical conductivity of K-feldspar at high temperature and high pressure. Mineralogy and Petrology, 2014, 108, 609-618.	0.4	28
22	Pressure-induced metallization in MoSe₂ under different pressure conditions. RSC Advances, 2019, 9, 5794-5803.	1.7	26
23	Electrical conductivity of Alm82Py15Grs3 almandine-rich garnet determined by impedance spectroscopy at high temperatures and high pressures. Tectonophysics, 2013, 608, 1086-1093.	0.9	24
24	Characterization of metallization and amorphization for GaP under different hydrostatic environments in diamond anvil cell up to 40.0 GPa. Review of Scientific Instruments, 2019, 90, 066103.	0.6	24
25	Temperature and pressure dependence of electrical conductivity in synthetic anorthite. Solid State Ionics, 2015, 276, 136-141.	1.3	22
26	Evidence of the pressure-induced conductivity switching of yttrium-doped SrTiO₃. Journal of Physics Condensed Matter, 2016, 28, 475501.	0.7	22
27	Pressure-induced phase transitions of ZnSe under different pressure environments. AIP Advances, 2019, 9, .	0.6	21
28	High-pressure structural phase transition and metallization in Ga₂S₃ under non-hydrostatic and hydrostatic conditions up to 36.4 GPa. Journal of Materials Chemistry C, 2021, 9, 2912-2918.	2.7	20
29	Sound velocities of Na0.4Mg0.6Al1.6Si0.4O4 NAL and CF phases to 73ÂGPa determined by Brillouin scattering method. Physics and Chemistry of Minerals, 2013, 40, 195-201.	0.3	18
30	Single crystal growth, characterization and high-pressure Raman spectroscopy of impurity-free magnesite (MgCO3). Physics and Chemistry of Minerals, 2018, 45, 423-434.	0.3	17
31	Electrical conductivity of gabbro: the effects of temperature, pressure and oxygen fugacity. European Journal of Mineralogy, 2015, 27, 215-224.	0.4	16
32	Electrical conductivity of mudstone (before and after dehydration at high P-T) and a test of high conductivity layers in the crust. American Mineralogist, 2017, 102, 2450-2456.	0.9	16
33	Deviatoric stresses promoted metallization in rhenium disulfide. Journal Physics D: Applied Physics, 2018, 51, 165101.	1.3	15
34	Characterization of the pressure-induced phase transition of metallization for MoTe2 under hydrostatic and non-hydrostatic conditions. AIP Advances, 2019, 9, 065104.	0.6	15
35	Electrical Conductivity of Clinopyroxeneâ€NaClâ€H 2 O System at High Temperatures and Pressures: Implications for Highâ€Conductivity Anomalies in the Deep Crust and Subduction Zone. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB019093.	1.4	15
36	Novel technique to control oxygen fugacity during high-pressure measurements of grain boundary conductivities of rocks. Review of Scientific Instruments, 2009, 80, 033903.	0.6	14

#	Article	IF	Citations
37	Experimental study on the electrical conductivity of quartz andesite at high temperature and high pressure: evidence of grain boundary transport. Solid Earth, 2015, 6, 1037-1043.	1.2	14
38	Effect of dehydration on the electrical conductivity of phyllite at high temperatures and pressures. Mineralogy and Petrology, 2017, 111, 853-863.	0.4	14
39	Influence of High Conductive Magnetite Impurity on the Electrical Conductivity of Dry Olivine Aggregates at High Temperature and High Pressure. Minerals (Basel, Switzerland), 2019, 9, 44.	0.8	14
40	Electrical Conductivity of Tiâ€Bearing Hydrous Olivine Aggregates at High Temperature and High Pressure. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020309.	1.4	14
41	Pressure-Induced Structural Phase Transition and Metallization of CrCl₃ under Different Hydrostatic Environments up to 50.0 GPa. Inorganic Chemistry, 2022, 61, 4852-4864.	1.9	14
42	Pressure-induced phase transitions for goethite investigated by Raman spectroscopy and electrical conductivity. High Pressure Research, 2019, 39, 106-116.	0.4	13
43	In-situ control of different oxygen fugacity experimental study on the electrical conductivity of lherzolite at high temperature and high pressure. Journal of Physics and Chemistry of Solids, 2008, 69, 101-110.	1.9	12
44	Electrical conductivity of hydrous natural basalts at high temperatures and pressures. Journal of Applied Geophysics, 2015, 112, 290-297.	0.9	12
45	Anomalous phase transition of Bi-doped Zn2GeO4 investigated by electrical conductivity and Raman spectroscopy under high pressure. Journal of Applied Physics, 2017, 121, 125901.	1.1	12
46	An Overview of the Experimental Studies on the Electrical Conductivity of Major Minerals in the Upper Mantle and Transition Zone. Materials, 2020, 13, 408.	1.3	12
47	Pressure-induced coupled structuralâ€“electronic transition in SnS₂ under different hydrostatic environments up to 39.7 GPa. RSC Advances, 2022, 12, 2454-2461.	1.7	12
48	Pressure-induced structural phase transition and dehydration for gypsum investigated by Raman spectroscopy and electrical conductivity. Chemical Physics Letters, 2018, 706, 151-157.	1.2	11
49	Structural Phase Transition and Metallization of Nanocrystalline Rutile Investigated by High-Pressure Raman Spectroscopy and Electrical Conductivity. Minerals (Basel, Switzerland), 2019, 9, 441.	0.8	11
50	The Phase Transition and Dehydration in Epsomite under High Temperature and High Pressure. Crystals, 2020, 10, 75.	1.0	11
51	Migration of impurity level reflected in the electrical conductivity variation for natural pyrite at high temperature and high pressure. Physics and Chemistry of Minerals, 2018, 45, 85-92.	0.3	10
52	Effect of chemical composition on the electrical conductivity of gneiss at high temperatures and pressures. Solid Earth, 2018, 9, 233-245.	1.2	10
53	Phase Transition and Metallization of Orpiment by Raman Spectroscopy, Electrical Conductivity and Theoretical Calculation under High Pressure. Materials, 2019, 12, 784.	1.3	10
54	High-pressure structural phase transitions and metallization in layered HfS₂ under different hydrostatic environments up to 42.1 GPa. Journal of Materials Chemistry C, 0, , .	2.7	10

#	Article	IF	Citations
55	Pressure-induced phase-transition and improvement of the microdielectric properties in yttrium-doped SrZrO ₃. Europhysics Letters, 2016, 114, 56003.	0.7	9
56	Experimental measurement of the electrical of the electrical conductivity of single crystal olivine at high temperature and high pressure under different oxygen fugacities *. Progress in Natural Science: Materials International, 2006, 16, 387-393.	1.8	8
57	Raman scattering of 2H-MoS2 at simultaneous high temperature and high pressure (up to 600 K) Tj ETQq1 1 0.784314 rgBT /Ov	0.6	8
58	High-pressure investigations on the isostructural phase transition and metallization in realgar with diamond anvil cells. Geoscience Frontiers, 2021, 12, 1031-1037.	4.3	8
59	Pressure-induced improvement of grain boundary properties in yttrium-doped BaZrO₃. Journal Physics D: Applied Physics, 2016, 49, 345102.	1.3	7
60	Evidences for phase transition and metallization in Î²-In2S3 at high pressure. Chemical Physics, 2019, 524, 63-69.	0.9	7
61	Pressure-induced structural phase transitions in natural kaolinite investigated by Raman spectroscopy and electrical conductivity. American Mineralogist, 2021, , .	0.9	7
62	Electrical properties of dry polycrystalline olivine mixed with various chromite contents: Implications for the high conductivity anomalies in subduction zones. Geoscience Frontiers, 2021, 12, 101178.	4.3	7
63	Thermal Ionization of Hydrogen in Hydrous Olivine With Enhanced and Anisotropic Conductivity. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022939.	1.4	7
64	Constraints on fluids in the continental crust from laboratory-based electrical conductivity measurements of plagioclase. Gondwana Research, 2022, 107, 1-12.	3.0	7
65	Experimental Study on the Electrical Conductivity of Pyroxene Andesite at High Temperature and High Pressure. Pure and Applied Geophysics, 2017, 174, 1033-1041.	0.8	6
66	Pressure-induced reversible metallization and phase transition in Zinc Telluride. Modern Physics Letters B, 2018, 32, 1850342.	1.0	6
67	Some Remarks on the Electrical Conductivity of Hydrous Silicate Minerals in the Earth Crust, Upper Mantle and Subduction Zone at High Temperatures and High Pressures. Minerals (Basel, Switzerland), 2022, 12, 161.	0.8	6
68	Reply to comment on â€œHigh and highly anisotropic electrical conductivity of the asthenosphere due to hydrogen diffusion in olivineâ€•by Dai and Karato [Earth Planet. Sci. Lett. 408 (2014) 79â€“86]. Earth and Planetary Science Letters, 2015, 427, 300-302.	1.8	5
69	Highâ€“pressure electrical conductivity and Raman spectroscopy of chalcanthite. Spectroscopy Letters, 2018, 51, 531-539.	0.5	5
70	Effect of Temperature, Pressure, and Chemical Composition on the Electrical Conductivity of Schist: Implications for Electrical Structures under the Tibetan Plateau. Materials, 2019, 12, 961.	1.3	5
71	The Elastic Properties of Î²-Mg2SiO4 Containing 0.73 wt.% of H2O to 10 GPa and 600 K by Ultrasonic Interferometry with Synchrotron X-Radiation. Minerals (Basel, Switzerland), 2020, 10, 209.	0.8	4
72	Effect of temperature, pressure and chemical composition on the electrical conductivity of granulite and geophysical implications. Journal of Mineralogical and Petrological Sciences, 2019, 114, 87-98.	0.4	3

#	Article	IF	Citations
73	Pressure-Induced Structural Phase Transition and Metallization in Ga2Se3 Up to 40.2 GPa under Non-Hydrostatic and Hydrostatic Environments. Crystals, 2021, 11, 746.	1.0	3
74	Pressure-induced metallic phase transition in gallium arsenide up to 24.3 GPa under hydrostatic conditions. Modern Physics Letters B, 2021, 35, .	1.0	3
75	Influence of Saline Fluids on the Electrical Conductivity of Olivine Aggregates at High Temperature and High Pressure and Its Geological Implications. Frontiers in Earth Science, 2021, 9, .	0.8	3
76	Experimental study on the electrical properties of carbonaceous slate: a special natural rock with unusually high conductivity at high temperatures and pressures. High Temperatures - High Pressures, 2020, 48, 439-454.	0.3	2
77	Experimental Research on Electrical Conductivity of the Olivine-Ilmenite System at High Temperatures and High Pressures. Frontiers in Earth Science, 2022, 10, .	0.8	2
78	Electrical conductivities of minerals and rocks in the Earth crust, upper mantle, mantle transition zone and subduction zone. Acta Geologica Sinica, 2019, 93, 120-121.	0.8	1
79	Some New Progress in the Experimental Measurements on Electrical Property of Main Minerals in the Upper Mantle at High Temperatures and High Pressures. , 0, , .		1
80	Effect of Different Mineralogical Proportions on the Electrical Conductivity of Dry Hot-Pressed Sintering Gabbro at High Temperatures and Pressures. Minerals (Basel, Switzerland), 2022, 12, 336.	0.8	1
81	High-Temperature and High-Pressure Phase Transition of Natural Barite Investigated by Raman Spectroscopy and Electrical Conductivity. Frontiers in Earth Science, 2022, 10, .	0.8	1
82	Erratum to â€œReply to comment on â€˜High and highly anisotropic electrical conductivity of the asthenosphere due to hydrogen diffusion in olivineâ€™ by Dai and Karato [Earth Planet. Sci. Lett. 408 (2014) 79â€“86]â€•[Earth Planet. Sci. Lett. 427 (2015) 300â€“302]. Earth and Planetary Science Letters, 2016, 454, 319.	1.8	0
83	The Influence of Dehydration on the Electrical Conductivity of Trachyandesite at High Temperatures and High Pressures. Journal of Materials Science and Engineering A, 2017, 7, .	0.0	0