Nancy L. Ross

List of Publications by Year
in descending order

122	5,181	87723	91712
papers	citations	38 h-index	69 g-index

122	122	122	3973
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Crystallographically controlled void space at grain boundaries in the Harkless quartzite. Journal of Structural Geology, 2021, 143, 104235.	1.0	5
2	High-Pressure Raman and Infrared Spectroscopic Study of Prehnite. Minerals (Basel, Switzerland), 2020, 10, 312.	0.8	6
3	The incompressibility of atoms at high pressures. American Mineralogist, 2020, 105, 1761-1768.	0.9	2
4	New Insights about CuO Nanoparticles from Inelastic Neutron Scattering. Nanomaterials, 2019, 9, 312.	1.9	3
5	Sulfide bonded atomic radii. Physics and Chemistry of Minerals, 2017, 44, 561-566.	0.3	3
6	The structural response of gadolinium phosphate to pressure. Journal of Solid State Chemistry, 2016, 241, 180-186.	1.4	18
7	Elasticity of plagioclase feldspars. Journal of Geophysical Research: Solid Earth, 2016, 121, 663-675.	1.4	76
8	Bond length estimates for oxide crystals with a molecular power law expression. Physics and Chemistry of Minerals, 2015, 42, 587-593.	0.3	7
9	Non-hydrostatic behavior of KBr as a pressure medium in diamond anvil cells up to 5.63 GPa. Journal of Physics Condensed Matter, 2015, 27, 185402.	0.7	13
10	Gallium Arsenate Dihydrate under Pressure: Elastic Properties, Compression Mechanism, and Hydrogen Bonding. Inorganic Chemistry, 2015, 54, 7548-7554.	1.9	7
11	Petalite under pressure: Elastic behavior and phase stability. American Mineralogist, 2015, 100, 714-721.	0.9	8
12	Thermodynamic Properties of Î±-Fe₂O₃ and Fe₃O₄ Nanoparticles. Journal of Physical Chemistry C, 2015, 119, 9609-9616.	1.5	10
13	Pauling bond strength, bond length and electron density distribution. Physics and Chemistry of Minerals, 2014, 41, 17-25.	0.3	15
14	Insights into the crystal chemistry of Earth materials rendered by electron density distributions: Pauling's rules revisited. American Mineralogist, 2014, 99, 1071-1084.	0.9	25
15	Pressureâ€Induced Bond Rearrangement and Reversible Phase Transformation in a Metalâ€“Organic Framework. Angewandte Chemie - International Edition, 2014, 53, 5583-5586.	7.2	109
16	The influence of pressure on the structure of a 2D uranium(VI) carboxyphosphonoate compound. Journal of Solid State Chemistry, 2014, 218, 1-5.	1.4	8
17	High-pressure behavior of thiospinel CuCr2S4. American Mineralogist, 2014, 99, 908-913.	0.9	4
18	The influence of pressure on the photoluminescence properties of a terbium-adipate framework. Journal of Solid State Chemistry, 2013, 202, 99-104.	1.4	14

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19	Inelastic neutron scattering studies of hydrated CuO, ZnO and CeO2 nanoparticles. Chemical Physics, 2013, 427, 66-70.	0.9	7
20	Bonded Radii and the Contraction of the Electron Density of the Oxygen Atom by Bonded Interactions. Journal of Physical Chemistry A, 2013, 117, 1632-1640.	1.1	35
21	Pressure impact on the structure, elasticity, and electron density distribution of CaSi<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>5</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 87, .	1.1	8
22	The thermodynamic properties of hydrated Î³-Al2O3 nanoparticles. Journal of Chemical Physics, 2013, 139, 244705.	1.2	16
23	Structural controls on the anisotropy of tetrahedral frameworks: the example of monoclinic feldspars. European Journal of Mineralogy, 2013, 25, 597-614.	0.4	20
24	Properties of atoms under pressure: Bonded interactions of the atoms in three perovskites. Journal of Chemical Physics, 2012, 137, 164313.	1.2	12
25	The high pressure behaviour of the 3D copper carbonate framework {[Cu(CO₃)₂](CH₆N₃)₂}_n. Journal of Materials Chemistry, 2012, 22, 2074-2080.	6.7	14
26	Heat Capacity Studies of Surface Water Confined on Cassiterite (SnO₂) Nanoparticles. Journal of Physical Chemistry C, 2012, 116, 3910-3917.	1.5	26
27	Pressure-induced structural transformations in pure and Ru-doped 0.9PbZn<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:math>Nb<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn><mml:mo>/</mml:mo><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:math>O<mml:math xmlns:mml="http://www.w3.org/1998/Math/Ma. Physical Review B, 2012, 85, .	1.1	13
28	Thermodynamic properties of water confined on the surface of PdO nanoparticles. Journal of Chemical Thermodynamics, 2012, 51, 103-106.	1.0	7
29	Influence of Particle Size and Water Coverage on the Thermodynamic Properties of Water Confined on the Surface of SnO₂ Cassiterite Nanoparticles. Journal of Physical Chemistry C, 2011, 115, 21105-21112.	1.5	19
30	First-principles study on thermodynamic properties and phase transitions in TiS2. Journal of Physics Condensed Matter, 2011, 23, 055401.	0.7	19
31	Vibrational and thermodynamic properties of Ni3S2 polymorphs from first-principles calculations. Physics and Chemistry of Minerals, 2011, 38, 241-249.	0.3	6
32	Thioarsenides: a case for long-range Lewis acidâ€“base-directed van der Waals interactions. Physics and Chemistry of Minerals, 2011, 38, 267-291.	0.3	12
33	Determination of the magnetic contribution to the heat capacity of cobalt oxide nanoparticles and the thermodynamic properties of the hydration layers. Journal of Physics Condensed Matter, 2011, 23, 205303.	0.7	4
34	High-pressure crystal structure of elastically isotropic CaTiO3perovskite under hydrostatic and non-hydrostatic conditions. Journal of Physics Condensed Matter, 2011, 23, 455401.	0.7	12
35	The structural variation of rhombohedral LaAlO₃perovskite under non-hydrostatic stress fields in a diamond-anvil cell. Journal of Physics Condensed Matter, 2011, 23, 175901.	0.7	5
36	Effects of deviatoric stresses in the diamond-anvil pressure cell on single-crystal samples. Journal of Applied Crystallography, 2010, 43, 743-751.	1.9	27

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37	Presentation of the 2009 Roebling Medal of the Mineralogical Society of America to Alexandra Navrotsky. American Mineralogist, 2010, 95, 659-660.	0.9	0
38	Prediction of high-pressure polymorphism in NiS₂at megabar pressures. Journal of Physics Condensed Matter, 2010, 22, 235401.	0.7	5
39	Bond Paths and van der Waals Interactions in Orpiment, As₂S₃. Journal of Physical Chemistry A, 2010, 114, 6550-6557.	1.1	29
40	Equation of state and structure of prehnite to 9.8 GPa. European Journal of Mineralogy, 2009, 21, 561-570.	0.4	8
41	Role of Directed van der Waals Bonded Interactions in the Determination of the Structures of Molecular Arsenate Solids. Journal of Physical Chemistry A, 2009, 113, 736-749.	1.1	30
42	Inelastic Neutron Scattering Study of Confined Surface Water on Rutile Nanoparticles. Journal of Physical Chemistry A, 2009, 113, 2796-2800.	1.1	49
43	Bonded interactions in silica polymorphs, silicates, and siloxane molecules. American Mineralogist, 2009, 94, 1085-1102.	0.9	37
44	High-pressure crystallography of rhombohedral PrAlO₃perovskite. Journal of Physics Condensed Matter, 2009, 21, 235403.	0.7	18
45	Pressure-Induced Cooperative Bond Rearrangement in a Zinc Imidazolate Framework: A High-Pressure Single-Crystal X-Ray Diffraction Study. Journal of the American Chemical Society, 2009, 131, 4022-4026.	6.6	148
46	Studies of Mineralâ€“Water Surfaces. Neutron Scattering Applications and Techniques, 2009, , 235-256.	0.2	7
47	The effect of oxygen vacancies and aluminium substitution on the high-pressure properties of brownmillerite-structured Ca2Fe2â^'x Al x O5. Physics and Chemistry of Minerals, 2008, 35, 493-504.	0.3	11
48	Experimental Bond Critical Point and Local Energy Density Properties Determined for Mnâ^'O, Feâ^'O, and Coâ^'O Bonded Interactions for Tephroite, Mn2SiO4, Fayalite, Fe2SiO4, and Co2SiO4 Olivine and Selected Organic Metal Complexes: Comparison with Properties Calculated for Non-Transition and Transition Metal Mâ^'O Bonded Interactions for Silicates and Oxides. Journal of Physical Chemistry A, 2008, 112, 8811-8823.	1.1	35
49	Bonded interactions and the crystal chemistry of minerals: a review. Zeitschrift Fur Kristallographie - Crystalline Materials, 2008, 223, 01-40.	0.4	43
50	Shared and Closed-Shell Oâ^'O Interactions in Silicates. Journal of Physical Chemistry A, 2008, 112, 3693-3699.	1.1	43
51	Crystal chemistry and location of hydrogen atoms in prehnite. Mineralogical Magazine, 2008, 72, 1163-1179.	0.6	11
52	The development of an automated data analysis system for high-pressure powder diffraction data collected using an area detector. High Pressure Research, 2008, 28, 293-298.	0.4	2
53	Dynamics of Water Confined on a TiO₂ (Anatase) Surface. Journal of Physical Chemistry A, 2007, 111, 12584-12588.	1.1	54
54	Theoretical Electron Density Distributions for Fe- and Cu-Sulfide Earth Materials:Â A Connection between Bond Length, Bond Critical Point Properties, Local Energy Densities, and Bonded Interactions. Journal of Physical Chemistry B, 2007, 111, 1923-1931.	1.2	28

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55	Potential protonation sites in the Al2SiO5 polymorphs based on polarized FTIR spectroscopy and properties of the electron density distribution. Physics and Chemistry of Minerals, 2007, 34, 295-306.	0.3	5
56	High-pressure structural evolution of a perovskite solid solution (La1â^'x,Ndx)GaO3. Journal of Solid State Chemistry, 2007, 180, 3408-3424.	1.4	30
57	Crystal structure and equation of state of MgSiO3perovskite. Geophysical Research Letters, 2006, 33, .	1.5	41
58	Al, Fe substitution in the MgSiO3 perovskite structure: A single-crystal X-ray diffraction study. Physics of the Earth and Planetary Interiors, 2006, 155, 96-103.	0.7	58
59	Estimation of polyhedral compressibilities and structural evolution of GdFeO3-type perovskites at high pressures. Acta Crystallographica Section B: Structural Science, 2006, 62, 431-439.	1.8	24
60	Single-crystal Neutron Diffraction: Present and Future Applications. Reviews in Mineralogy and Geochemistry, 2006, 63, 59-80.	2.2	7
61	ELF isosurface maps for the Al2SiO5 polymorphs. Physics and Chemistry of Minerals, 2006, 33, 138-144.	0.3	6
62	Classification of metal-oxide bonded interactions based on local potential- and kinetic-energy densities. Journal of Chemical Physics, 2006, 124, 084704.	1.2	35
63	Equations of state and structures of andalusite to 9.8 GPa and sillimanite to 8.5 GPa. American Mineralogist, 2006, 91, 319-326.	0.9	34
64	A mapping of the electron localization function for earth materials. Physics and Chemistry of Minerals, 2005, 32, 208-221.	0.3	19
65	Equations of state of dense hydrous magnesium silicates: results from single-crystal X-ray diffraction. Mineralogical Magazine, 2005, 69, 273-287.	0.6	7
66	Compression of the perovskite-related mineral bernalite Fe(OH)3 to 9 GPa and a reappraisal of its structure. Mineralogical Magazine, 2005, 69, 309-315.	0.6	11
67	Comparison of the Electron Localization Function and Deformation Electron Density Maps for Selected Earth Materials. Journal of Physical Chemistry A, 2005, 109, 10022-10027.	1.1	20
68	Electron Density Distributions Calculated for the Nickel Sulfides Millerite, Vaesite, and Heazlewoodite and Nickel Metal:Â A Case for the Importance of Niâ^'Ni Bond Paths for Electron Transport. Journal of Physical Chemistry B, 2005, 109, 21788-21795.	1.2	41
69	Compression of albite, NaAlSi3O8. American Mineralogist, 2005, 90, 1115-1120.	0.9	63
70	The compression of framework minerals: beyond rigid polyhedra. European Journal of Mineralogy, 2005, 17, 193-200.	0.4	17
71	General Rules for Predicting Phase Transitions in Perovskites due to Octahedral Tilting. Physical Review Letters, 2005, 95, 025503.	2.9	146
72	Polyhedral control of the rhombohedral to cubic phase transition in LaAlO3 perovskite. Journal of Physics Condensed Matter, 2004, 16, 8763-8773.	0.7	50

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73	A modeling of the structure and favorable H-docking sites and defects for the high-pressure silica polymorph stishovite. Physics and Chemistry of Minerals, 2004, 31, 232-239.	0.3	22
74	Tilting and distortion of CaSnO 3 perovskite to 7 GPa determined from single-crystal X-ray diffraction. Physics and Chemistry of Minerals, 2004, 31, 299-305.	0.3	61
75	New view of the high-pressure behaviour of GdFeO3-type perovskites. Acta Crystallographica Section B: Structural Science, 2004, 60, 263-271.	1.8	98
76	High-pressure single-crystal X-ray diffraction study of YAlO3 perovskite. Journal of Solid State Chemistry, 2004, 177, 1276-1284.	1.4	80
77	High-pressure structural behavior of GdAlO3 and GdFeO3 perovskites. Journal of Solid State Chemistry, 2004, 177, 3768-3775.	1.4	51
78	Equations of state of GdFeO3and GdAlO3perovskites. Journal of Physics Condensed Matter, 2004, 16, 5721-5730.	0.7	35
79	Oxidation state of iron in hydrous mantle phases: implications for subduction and mantle oxygen fugacity. Physics of the Earth and Planetary Interiors, 2004, 143-144, 157-169.	0.7	85
80	Crystal chemistry of ferric iron in (Mg,Fe)(Si,Al)O 3 majorite with implications for the transition zone. Physics and Chemistry of Minerals, 2003, 30, 206-216.	0.3	39
81	Compressibility of CaZrO3 perovskite: Comparison with Ca-oxide perovskites. Journal of Solid State Chemistry, 2003, 172, 123-126.	1.4	56
82	Synchrotron infrared spectroscopy of OH-chondrodite and OH-clinohumite at high pressure. American Mineralogist, 2003, 88, 1412-1415.	0.9	26
83	Potential docking sites and positions of hydrogen in high-pressure silicates. American Mineralogist, 2003, 88, 1452-1459.	0.9	35
84	Compressibility of stottite, FeGe(OH)₆: An octahedral framework with protonated O atoms. American Mineralogist, 2002, 87, 1410-1414.	0.9	7
85	Compressibility of brownmillerite (Ca2Fe2O5): effect of vacancies on the elastic properties of perovskites. Physics of the Earth and Planetary Interiors, 2002, 129, 145-151.	0.7	38
86	Neutron diffraction at simultaneous high temperatures and pressures, with measurement of temperature by neutron radiography. Mineralogical Magazine, 2001, 65, 737-748.	0.6	60
87	Stabilities and equations of state of dense hydrous magnesium silicates. Physics of the Earth and Planetary Interiors, 2001, 127, 181-196.	0.7	88
88	Raman spectroscopic studies of phase E to 19 GPa. American Mineralogist, 2001, 86, 1275-1281.	0.9	17
89	Elasticity of CaSnO 3 perovskite. Physics and Chemistry of Minerals, 2001, 28, 35-43.	0.3	58
90	Enthalpy of formation of CaSi 2 O 5, a quenched high-pressure phase with pentacoordinate silicon. Physics and Chemistry of Minerals, 2001, 28, 57-60.	0.3	20

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91	Compression of synthetic hydroxylclinohumite [Mg9Si4O16(OH)2] and hydroxylchondrodite [Mg5Si2O8(OH)2]. American Mineralogist, 2001, 86, 990-996.	0.9	35
92	A high-temperature and high-pressure Raman spectroscopic study of CaGeO 3 garnet. Physics and Chemistry of Minerals, 2000, 27, 213-219.	0.3	8
93	Equation of state of phase E. Mineralogical Magazine, 2000, 64, 561-567.	0.6	18
94	Equations of state of magnesium silicates anhydrous B and superhydrous B. Physics and Chemistry of Minerals, 1999, 26, 570-575.	0.3	40
95	Enhancement of Cation Diffusion Rates Across the 410-Kilometer Discontinuity in Earth's Mantle. Science, 1999, 283, 362-365.	6.0	46
96	High pressure study of ScAlO 3 perovskite. Physics and Chemistry of Minerals, 1998, 25, 597-602.	0.3	42
97	Computer simulation of the infrared and Raman activity of pyrope garnet, and assignment of calculated modes to specific atomic motions. American Mineralogist, 1998, 83, 841-847.	0.9	27
98	The equation of state and high-pressure behavior of magnesite. American Mineralogist, 1997, 82, 682-688.	0.9	71
99	Structural characterization of pentacoordinate silicon in a calcium silicate. Nature, 1996, 384, 441-444.	13.7	105
100	Compression mechanisms and equations of state. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1996, 354, 1449-1459.	1.6	12
101	Distortion of GdFeO₃-type perovskites with pressure: A study of yalo₃to 5 GPa. Phase Transitions, 1996, 58, 27-41.	0.6	34
102	High-pressure single-crystal X-ray diffraction study of âˆ-FeSi. Acta Crystallographica Section A: Foundations and Advances, 1996, 52, C530-C530.	0.3	4
103	Ab initio study of MgSiO3 and CaSiO3 perovskites at lower-mantle pressures. Physics of the Earth and Planetary Interiors, 1995, 90, 101-112.	0.7	168
104	Polarised single crystal Raman spectroscopy of sinhalite, MgAlBO4. Spectrochimica Acta Part A: Molecular Spectroscopy, 1994, 50, 1287-1294.	0.1	7
105	Fourier transform Raman spectroscopy at high pressures: Preliminary results of sulphur to 56 kbar. Spectrochimica Acta Part A: Molecular Spectroscopy, 1993, 49, 681-684.	0.1	12
106	High pressure structural study of MnGeO3 ilmenite. Zeitschrift Fur Kristallographie - Crystalline Materials, 1993, 204, .	0.4	2
107	Single-crystal X-ray diffraction at high pressures with diamond-anvil cells. Phase Transitions, 1992, 39, 13-32.	0.6	19
108	Stability of high-density clinoenstatite at upper-mantle pressures. Nature, 1992, 358, 322-324.	13.7	208

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109	Crystal structure of high pressure SrB2O4(IV). Journal of Solid State Chemistry, 1991, 90, 27-30.	1.4	24
110	Structure of high-pressure MnGeO3 ilmenite. Acta Crystallographica Section C: Crystal Structure Communications, 1991, 47, 1794-1796.	0.4	1
111	Single crystal structure refinement of high-pressure ZnGeO3ilmenite. Zeitschrift FÃ¼r Kristallographie, 1990, 191, 93-104.	1.1	10
112	Incoherent inelastic neutron scattering investigation of ammoniated titanium disulfide. Solid State Ionics, 1989, 34, 281-286.	1.3	4
113	Spontaneous strain below the $$Iar 1 - Par 1$$ transition in anorthite at pressure. Physics and Chemistry of Minerals, 1989, 16, 539-544.	0.3	20
114	Crystallography, chemistry and structural disorder in the new high- Tc Biâ€“Caâ€“Srâ€“Cuâ€“O superconductor. Nature, 1988, 332, 334-337.	13.7	75
115	A silica-rich sodium pyroxene phase with six-coordinated silicon. Nature, 1988, 335, 156-158.	13.7	73
116	Superconductivity in the high-TcBi-Ca-Sr-Cu-O system: Phase identification. Physical Review Letters, 1988, 60, 1174-1177.	2.9	567
117	100-K superconducting phases in the Tl-Ca-Ba-Cu-O system. Physical Review Letters, 1988, 60, 1657-1660.	2.9	407
118	Crystallographic description of phases in the Y-Ba-Cu-O superconductor. Physical Review B, 1987, 35, 7238-7241.	1.1	298
119	Heat capacity calculations for Al2O3 corundum and MgSiO3 ilmenite. Physics and Chemistry of Minerals, 1987, 14, 225-234.	0.3	54
120	The Mg2GeO4 olivine-spinel phase transition. Physics and Chemistry of Minerals, 1987, 14, 473-481.	0.3	62
121	Phase transitions among the CaGeO₃ polymorphs (wollastonite, garnet, and perovskite) Tj ETQq1 1 0.784314 rgBT /Ove spectroscopy and calculation. Journal of Geophysical Research, 1986, 91, 4685-4696.	3.3	84
122	Synthesis, characterization and properties of the new ionic intercalation compound (NH+4)0.22TiS0.22â^'2. Materials Research Bulletin, 1986, 21, 1323-1333.	2.7	1