

Nancy L. Ross

List of Publications by Year in descending order

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122
papers

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87723

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docs citations

122
times ranked

3973
citing authors

#	ARTICLE	IF	CITATIONS
1	Superconductivity in the high-Tc Bi-Ca-Sr-Cu-O system: Phase identification. <i>Physical Review Letters</i> , 1988, 60, 1174-1177.	2.9	567
2	100-K superconducting phases in the Tl-Ca-Ba-Cu-O system. <i>Physical Review Letters</i> , 1988, 60, 1657-1660.	2.9	407
3	Crystallographic description of phases in the Y-Ba-Cu-O superconductor. <i>Physical Review B</i> , 1987, 35, 7238-7241.	1.1	298
4	Stability of high-density clinoenstatite at upper-mantle pressures. <i>Nature</i> , 1992, 358, 322-324.	13.7	208
5	Ab initio study of MgSiO ₃ and CaSiO ₃ perovskites at lower-mantle pressures. <i>Physics of the Earth and Planetary Interiors</i> , 1995, 90, 101-112.	0.7	168
6	Pressure-Induced Cooperative Bond Rearrangement in a Zinc Imidazolate Framework: A High-Pressure Single-Crystal X-Ray Diffraction Study. <i>Journal of the American Chemical Society</i> , 2009, 131, 4022-4026.	6.6	148
7	General Rules for Predicting Phase Transitions in Perovskites due to Octahedral Tilting. <i>Physical Review Letters</i> , 2005, 95, 025503.	2.9	146
8	Pressure-Induced Bond Rearrangement and Reversible Phase Transformation in a Metal-Organic Framework. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 5583-5586.	7.2	109
9	Structural characterization of pentacoordinate silicon in a calcium silicate. <i>Nature</i> , 1996, 384, 441-444.	13.7	105
10	New view of the high-pressure behaviour of GdFeO ₃ -type perovskites. <i>Acta Crystallographica Section B: Structural Science</i> , 2004, 60, 263-271.	1.8	98
11	Stabilities and equations of state of dense hydrous magnesium silicates. <i>Physics of the Earth and Planetary Interiors</i> , 2001, 127, 181-196.	0.7	88
12	Oxidation state of iron in hydrous mantle phases: implications for subduction and mantle oxygen fugacity. <i>Physics of the Earth and Planetary Interiors</i> , 2004, 143-144, 157-169.	0.7	85
13	Phase transitions among the CaGeO ₃ polymorphs (wollastonite, garnet, and perovskite) by Raman spectroscopy and calculation. <i>Journal of Geophysical Research</i> , 1986, 91, 4685-4696.	3.3	84
14	High-pressure single-crystal X-ray diffraction study of YAlO ₃ perovskite. <i>Journal of Solid State Chemistry</i> , 2004, 177, 1276-1284.	1.4	80
15	Elasticity of plagioclase feldspars. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 663-675.	1.4	76
16	Crystallography, chemistry and structural disorder in the new high-Tc Bi-Ca-Sr-Cu-O superconductor. <i>Nature</i> , 1988, 332, 334-337.	13.7	75
17	A silica-rich sodium pyroxene phase with six-coordinated silicon. <i>Nature</i> , 1988, 335, 156-158.	13.7	73
18	The equation of state and high-pressure behavior of magnesite. <i>American Mineralogist</i> , 1997, 82, 682-688.	0.9	71

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19	Compression of albite, NaAlSi ₃ O ₈ . <i>American Mineralogist</i> , 2005, 90, 1115-1120.	0.9	63
20	The Mg ₂ GeO ₄ olivine-spinel phase transition. <i>Physics and Chemistry of Minerals</i> , 1987, 14, 473-481.	0.3	62
21	Tilting and distortion of CaSnO ₃ perovskite to 7 GPa determined from single-crystal X-ray diffraction. <i>Physics and Chemistry of Minerals</i> , 2004, 31, 299-305.	0.3	61
22	Neutron diffraction at simultaneous high temperatures and pressures, with measurement of temperature by neutron radiography. <i>Mineralogical Magazine</i> , 2001, 65, 737-748.	0.6	60
23	Elasticity of CaSnO ₃ perovskite. <i>Physics and Chemistry of Minerals</i> , 2001, 28, 35-43.	0.3	58
24	Al, Fe substitution in the MgSiO ₃ perovskite structure: A single-crystal X-ray diffraction study. <i>Physics of the Earth and Planetary Interiors</i> , 2006, 155, 96-103.	0.7	58
25	Compressibility of CaZrO ₃ perovskite: Comparison with Ca-oxide perovskites. <i>Journal of Solid State Chemistry</i> , 2003, 172, 123-126.	1.4	56
26	Heat capacity calculations for Al ₂ O ₃ corundum and MgSiO ₃ ilmenite. <i>Physics and Chemistry of Minerals</i> , 1987, 14, 225-234.	0.3	54
27	Dynamics of Water Confined on a TiO ₂ (Anatase) Surface. <i>Journal of Physical Chemistry A</i> , 2007, 111, 12584-12588.	1.1	54
28	High-pressure structural behavior of GdAlO ₃ and GdFeO ₃ perovskites. <i>Journal of Solid State Chemistry</i> , 2004, 177, 3768-3775.	1.4	51
29	Polyhedral control of the rhombohedral to cubic phase transition in LaAlO ₃ perovskite. <i>Journal of Physics Condensed Matter</i> , 2004, 16, 8763-8773.	0.7	50
30	Inelastic Neutron Scattering Study of Confined Surface Water on Rutile Nanoparticles. <i>Journal of Physical Chemistry A</i> , 2009, 113, 2796-2800.	1.1	49
31	Enhancement of Cation Diffusion Rates Across the 410-Kilometer Discontinuity in Earth's Mantle. <i>Science</i> , 1999, 283, 362-365.	6.0	46
32	Bonded interactions and the crystal chemistry of minerals: a review. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2008, 223, 01-40.	0.4	43
33	Shared and Closed-Shell O ²⁻ O Interactions in Silicates. <i>Journal of Physical Chemistry A</i> , 2008, 112, 3693-3699.	1.1	43
34	High pressure study of ScAlO ₃ perovskite. <i>Physics and Chemistry of Minerals</i> , 1998, 25, 597-602.	0.3	42
35	Electron Density Distributions Calculated for the Nickel Sulfides Millerite, Vaesite, and Heazlewoodite and Nickel Metal: A Case for the Importance of Ni ²⁺ Ni Bond Paths for Electron Transport. <i>Journal of Physical Chemistry B</i> , 2005, 109, 21788-21795.	1.2	41
36	Crystal structure and equation of state of MgSiO ₃ perovskite. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	41

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37	Equations of state of magnesium silicates anhydrous B and superhydrous B. <i>Physics and Chemistry of Minerals</i> , 1999, 26, 570-575.	0.3	40
38	Crystal chemistry of ferric iron in (Mg,Fe)(Si,Al)O ₃ majorite with implications for the transition zone. <i>Physics and Chemistry of Minerals</i> , 2003, 30, 206-216.	0.3	39
39	Compressibility of brownmillerite (Ca ₂ Fe ₂ O ₅): effect of vacancies on the elastic properties of perovskites. <i>Physics of the Earth and Planetary Interiors</i> , 2002, 129, 145-151.	0.7	38
40	Bonded interactions in silica polymorphs, silicates, and siloxane molecules. <i>American Mineralogist</i> , 2009, 94, 1085-1102.	0.9	37
41	Compression of synthetic hydroxylclinohumite [Mg ₉ Si ₄ O ₁₆ (OH) ₂] and hydroxylchondrodite [Mg ₅ Si ₂ O ₈ (OH) ₂]. <i>American Mineralogist</i> , 2001, 86, 990-996.	0.9	35
42	Potential docking sites and positions of hydrogen in high-pressure silicates. <i>American Mineralogist</i> , 2003, 88, 1452-1459.	0.9	35
43	Equations of state of GdFeO ₃ and GdAlO ₃ perovskites. <i>Journal of Physics Condensed Matter</i> , 2004, 16, 5721-5730.	0.7	35
44	Classification of metal-oxide bonded interactions based on local potential- and kinetic-energy densities. <i>Journal of Chemical Physics</i> , 2006, 124, 084704.	1.2	35
45	Experimental Bond Critical Point and Local Energy Density Properties Determined for Mn ²⁺ O, Fe ²⁺ O, and Co ²⁺ O Bonded Interactions for Tephroite, Mn ₂ SiO ₄ , Fayalite, Fe ₂ SiO ₄ , and Co ₂ SiO ₄ Olivine and Selected Organic Metal Complexes: Comparison with Properties Calculated for Non-Transition and Transition Metal M ²⁺ O Bonded Interactions for Silicates and Oxides. <i>Journal of Physical Chemistry A</i> , 2008, 112, 8811-8823.	1.1	35
46	Bonded Radii and the Contraction of the Electron Density of the Oxygen Atom by Bonded Interactions. <i>Journal of Physical Chemistry A</i> , 2013, 117, 1632-1640.	1.1	35
47	Distortion of GdFeO ₃ -type perovskites with pressure: A study of yAlO ₃ to 5 GPa. <i>Phase Transitions</i> , 1996, 58, 27-41.	0.6	34
48	Equations of state and structures of andalusite to 9.8 GPa and sillimanite to 8.5 GPa. <i>American Mineralogist</i> , 2006, 91, 319-326.	0.9	34
49	High-pressure structural evolution of a perovskite solid solution (La _{1-x} Ndx)GaO ₃ . <i>Journal of Solid State Chemistry</i> , 2007, 180, 3408-3424.	1.4	30
50	Role of Directed van der Waals Bonded Interactions in the Determination of the Structures of Molecular Arsenate Solids. <i>Journal of Physical Chemistry A</i> , 2009, 113, 736-749.	1.1	30
51	Bond Paths and van der Waals Interactions in Orpiment, As ₂ S ₃ . <i>Journal of Physical Chemistry A</i> , 2010, 114, 6550-6557.	1.1	29
52	Theoretical Electron Density Distributions for Fe- and Cu-Sulfide Earth Materials: A Connection between Bond Length, Bond Critical Point Properties, Local Energy Densities, and Bonded Interactions. <i>Journal of Physical Chemistry B</i> , 2007, 111, 1923-1931.	1.2	28
53	Computer simulation of the infrared and Raman activity of pyrope garnet, and assignment of calculated modes to specific atomic motions. <i>American Mineralogist</i> , 1998, 83, 841-847.	0.9	27
54	Effects of deviatoric stresses in the diamond-anvil pressure cell on single-crystal samples. <i>Journal of Applied Crystallography</i> , 2010, 43, 743-751.	1.9	27

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55	Synchrotron infrared spectroscopy of OH-chondrodite and OH-clinohumite at high pressure. <i>American Mineralogist</i> , 2003, 88, 1412-1415.	0.9	26
56	Heat Capacity Studies of Surface Water Confined on Cassiterite (SnO ₂) Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2012, 116, 3910-3917.	1.5	26
57	Insights into the crystal chemistry of Earth materials rendered by electron density distributions: Pauling's rules revisited. <i>American Mineralogist</i> , 2014, 99, 1071-1084.	0.9	25
58	Crystal structure of high pressure SrB ₂ O ₄ (IV). <i>Journal of Solid State Chemistry</i> , 1991, 90, 27-30.	1.4	24
59	Estimation of polyhedral compressibilities and structural evolution of GdFeO ₃ -type perovskites at high pressures. <i>Acta Crystallographica Section B: Structural Science</i> , 2006, 62, 431-439.	1.8	24
60	A modeling of the structure and favorable H-docking sites and defects for the high-pressure silica polymorph stishovite. <i>Physics and Chemistry of Minerals</i> , 2004, 31, 232-239.	0.3	22
61	Spontaneous strain below the $\Gamma_1 - \Gamma_2$ transition in anorthite at pressure. <i>Physics and Chemistry of Minerals</i> , 1989, 16, 539-544.	0.3	20
62	Enthalpy of formation of CaSi ₂ O ₅ , a quenched high-pressure phase with pentacoordinate silicon. <i>Physics and Chemistry of Minerals</i> , 2001, 28, 57-60.	0.3	20
63	Comparison of the Electron Localization Function and Deformation Electron Density Maps for Selected Earth Materials. <i>Journal of Physical Chemistry A</i> , 2005, 109, 10022-10027.	1.1	20
64	Structural controls on the anisotropy of tetrahedral frameworks: the example of monoclinic feldspars. <i>European Journal of Mineralogy</i> , 2013, 25, 597-614.	0.4	20
65	Single-crystal X-ray diffraction at high pressures with diamond-anvil cells. <i>Phase Transitions</i> , 1992, 39, 13-32.	0.6	19
66	A mapping of the electron localization function for earth materials. <i>Physics and Chemistry of Minerals</i> , 2005, 32, 208-221.	0.3	19
67	Influence of Particle Size and Water Coverage on the Thermodynamic Properties of Water Confined on the Surface of SnO ₂ Cassiterite Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2011, 115, 21105-21112.	1.5	19
68	First-principles study on thermodynamic properties and phase transitions in TiS ₂ . <i>Journal of Physics Condensed Matter</i> , 2011, 23, 055401.	0.7	19
69	High-pressure crystallography of rhombohedral PrAlO ₃ perovskite. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 235403.	0.7	18
70	The structural response of gadolinium phosphate to pressure. <i>Journal of Solid State Chemistry</i> , 2016, 241, 180-186.	1.4	18
71	Equation of state of phase E. <i>Mineralogical Magazine</i> , 2000, 64, 561-567.	0.6	18
72	Raman spectroscopic studies of phase E to 19 GPa. <i>American Mineralogist</i> , 2001, 86, 1275-1281.	0.9	17

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73	The compression of framework minerals: beyond rigid polyhedra. <i>European Journal of Mineralogy</i> , 2005, 17, 193-200.	0.4	17
74	The thermodynamic properties of hydrated $\hat{3}$ -Al ₂ O ₃ nanoparticles. <i>Journal of Chemical Physics</i> , 2013, 139, 244705.	1.2	16
75	Pauling bond strength, bond length and electron density distribution. <i>Physics and Chemistry of Minerals</i> , 2014, 41, 17-25.	0.3	15
76	The high pressure behaviour of the 3D copper carbonate framework $[[\text{Cu}(\text{CO}_3)_2]_2(\text{CH}_6\text{N}_3)_2]_n$. <i>Journal of Materials Chemistry</i> , 2012, 22, 2074-2080.	6.7	14
77	The influence of pressure on the photoluminescence properties of a terbium-adipate framework. <i>Journal of Solid State Chemistry</i> , 2013, 202, 99-104.	1.4	14
78	Pressure-induced structural transformations in pure and Ru-doped 0.9PbZn _{1-x} Nb _x O ₃ . <i>Physical Review B</i> , 2012, 85, .	1.1	13
79	Non-hydrostatic behavior of KBr as a pressure medium in diamond anvil cells up to 5.63 GPa. <i>Journal of Physics Condensed Matter</i> , 2015, 27, 185402.	0.7	13
80	Fourier transform Raman spectroscopy at high pressures: Preliminary results of sulphur to 56 kbar. <i>Spectrochimica Acta Part A: Molecular Spectroscopy</i> , 1993, 49, 681-684.	0.1	12
81	Compression mechanisms and equations of state. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 1996, 354, 1449-1459.	1.6	12
82	Thioarsenides: a case for long-range Lewis acid-base-directed van der Waals interactions. <i>Physics and Chemistry of Minerals</i> , 2011, 38, 267-291.	0.3	12
83	High-pressure crystal structure of elastically isotropic CaTiO ₃ perovskite under hydrostatic and non-hydrostatic conditions. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 455401.	0.7	12
84	Properties of atoms under pressure: Bonded interactions of the atoms in three perovskites. <i>Journal of Chemical Physics</i> , 2012, 137, 164313.	1.2	12
85	Compression of the perovskite-related mineral bernalite Fe(OH) ₃ to 9 GPa and a reappraisal of its structure. <i>Mineralogical Magazine</i> , 2005, 69, 309-315.	0.6	11
86	The effect of oxygen vacancies and aluminium substitution on the high-pressure properties of brownmillerite-structured Ca ₂ Fe _{2-2x} Al _x O ₅ . <i>Physics and Chemistry of Minerals</i> , 2008, 35, 493-504.	0.3	11
87	Crystal chemistry and location of hydrogen atoms in prehnite. <i>Mineralogical Magazine</i> , 2008, 72, 1163-1179.	0.6	11
88	Single crystal structure refinement of high-pressure ZnGeO ₃ ilmenite. <i>Zeitschrift für Kristallographie</i> , 1990, 191, 93-104.	1.1	10
89	Thermodynamic Properties of $\hat{1}\pm$ -Fe ₂ O ₃ and Fe ₃ O ₄ Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2015, 119, 9609-9616.	1.5	10
90	A high-temperature and high-pressure Raman spectroscopic study of CaGeO ₃ garnet. <i>Physics and Chemistry of Minerals</i> , 2000, 27, 213-219.	0.3	8

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91	Equation of state and structure of prehnite to 9.8 GPa. <i>European Journal of Mineralogy</i> , 2009, 21, 561-570.	0.4	8
92	Pressure impact on the structure, elasticity, and electron density distribution of CaSi_2O_5 . <i>Physical Review B</i> , 2013, 87, .	1.1	8
93	The influence of pressure on the structure of a 2D uranium(VI) carboxyphosphonate compound. <i>Journal of Solid State Chemistry</i> , 2014, 218, 1-5.	1.4	8
94	Petalite under pressure: Elastic behavior and phase stability. <i>American Mineralogist</i> , 2015, 100, 714-721.	0.9	8
95	Polarised single crystal Raman spectroscopy of sinhalite, MgAlBO_4 . <i>Spectrochimica Acta Part A: Molecular Spectroscopy</i> , 1994, 50, 1287-1294.	0.1	7
96	Compressibility of stottite, $\text{FeGe}(\text{OH})_6$: An octahedral framework with protonated O atoms. <i>American Mineralogist</i> , 2002, 87, 1410-1414.	0.9	7
97	Equations of state of dense hydrous magnesium silicates: results from single-crystal X-ray diffraction. <i>Mineralogical Magazine</i> , 2005, 69, 273-287.	0.6	7
98	Single-crystal Neutron Diffraction: Present and Future Applications. <i>Reviews in Mineralogy and Geochemistry</i> , 2006, 63, 59-80.	2.2	7
99	Thermodynamic properties of water confined on the surface of PdO nanoparticles. <i>Journal of Chemical Thermodynamics</i> , 2012, 51, 103-106.	1.0	7
100	Inelastic neutron scattering studies of hydrated CuO, ZnO and CeO ₂ nanoparticles. <i>Chemical Physics</i> , 2013, 427, 66-70.	0.9	7
101	Bond length estimates for oxide crystals with a molecular power law expression. <i>Physics and Chemistry of Minerals</i> , 2015, 42, 587-593.	0.3	7
102	Gallium Arsenate Dihydrate under Pressure: Elastic Properties, Compression Mechanism, and Hydrogen Bonding. <i>Inorganic Chemistry</i> , 2015, 54, 7548-7554.	1.9	7
103	Studies of Mineral-Water Surfaces. <i>Neutron Scattering Applications and Techniques</i> , 2009, , 235-256.	0.2	7
104	ELF isosurface maps for the Al_2SiO_5 polymorphs. <i>Physics and Chemistry of Minerals</i> , 2006, 33, 138-144.	0.3	6
105	Vibrational and thermodynamic properties of Ni_3S_2 polymorphs from first-principles calculations. <i>Physics and Chemistry of Minerals</i> , 2011, 38, 241-249.	0.3	6
106	High-Pressure Raman and Infrared Spectroscopic Study of Prehnite. <i>Minerals (Basel, Switzerland)</i> , 2020, 10, 312.	0.8	6
107	Potential protonation sites in the Al_2SiO_5 polymorphs based on polarized FTIR spectroscopy and properties of the electron density distribution. <i>Physics and Chemistry of Minerals</i> , 2007, 34, 295-306.	0.3	5
108	Prediction of high-pressure polymorphism in NiS_2 at megabar pressures. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 235401.	0.7	5

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109	The structural variation of rhombohedral LaAlO ₃ perovskite under non-hydrostatic stress fields in a diamond-anvil cell. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 175901.	0.7	5
110	Crystallographically controlled void space at grain boundaries in the Harkless quartzite. <i>Journal of Structural Geology</i> , 2021, 143, 104235.	1.0	5
111	Incoherent inelastic neutron scattering investigation of ammoniated titanium disulfide. <i>Solid State Ionics</i> , 1989, 34, 281-286.	1.3	4
112	Determination of the magnetic contribution to the heat capacity of cobalt oxide nanoparticles and the thermodynamic properties of the hydration layers. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 205303.	0.7	4
113	High-pressure behavior of thiospinel CuCr ₂ S ₄ . <i>American Mineralogist</i> , 2014, 99, 908-913.	0.9	4
114	High-pressure single-crystal X-ray diffraction study of α -FeSi. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 1996, 52, C530-C530.	0.3	4
115	Sulfide bonded atomic radii. <i>Physics and Chemistry of Minerals</i> , 2017, 44, 561-566.	0.3	3
116	New Insights about CuO Nanoparticles from Inelastic Neutron Scattering. <i>Nanomaterials</i> , 2019, 9, 312.	1.9	3
117	High pressure structural study of MnGeO ₃ ilmenite. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 1993, 204, .	0.4	2
118	The development of an automated data analysis system for high-pressure powder diffraction data collected using an area detector. <i>High Pressure Research</i> , 2008, 28, 293-298.	0.4	2
119	The incompressibility of atoms at high pressures. <i>American Mineralogist</i> , 2020, 105, 1761-1768.	0.9	2
120	Synthesis, characterization and properties of the new ionic intercalation compound (NH ₄) _{0.22} TiSO _{2.22} . <i>Materials Research Bulletin</i> , 1986, 21, 1323-1333.	2.7	1
121	Structure of high-pressure MnGeO ₃ ilmenite. <i>Acta Crystallographica Section C: Crystal Structure Communications</i> , 1991, 47, 1794-1796.	0.4	1
122	Presentation of the 2009 Roebling Medal of the Mineralogical Society of America to Alexandra Navrotsky. <i>American Mineralogist</i> , 2010, 95, 659-660.	0.9	0