

Isabelle Daniel

List of Publications by Year in descending order

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91
papers

3,967
citations

87843

38
h-index

128225

60
g-index

95
all docs

95
docs citations

95
times ranked

4015
citing authors

#	ARTICLE	IF	CITATIONS
1	High-Pressure Creep of Serpentine, Interseismic Deformation, and Initiation of Subduction. <i>Science</i> , 2007, 318, 1910-1913.	6.0	331
2	Origins of life and biochemistry under high-pressure conditions. <i>Chemical Society Reviews</i> , 2006, 35, 858.	18.7	231
3	High-pressure behaviour of serpentine minerals: a Raman spectroscopic study. <i>Physics and Chemistry of Minerals</i> , 2004, 31, 269-277.	0.3	176
4	The Variscan French Massif Central "a new addition to the ultra-high pressure metamorphic "club": exhumation processes and geodynamic consequences. <i>Tectonophysics</i> , 2001, 332, 143-167.	0.9	164
5	Phase relations and equation of state of a natural MORB: Implications for the density profile of subducted oceanic crust in the Earth's lower mantle. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	139
6	In situ Raman study and thermodynamic model of aqueous carbonate speciation in equilibrium with aragonite under subduction zone conditions. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 132, 375-390.	1.6	123
7	Kinetics of antigorite dehydration: A real-time X-ray diffraction study. <i>Earth and Planetary Science Letters</i> , 2005, 236, 899-913.	1.8	112
8	High-Pressure Biochemistry and Biophysics. <i>Reviews in Mineralogy and Geochemistry</i> , 2013, 75, 607-648.	2.2	108
9	In-situ high-temperature Raman spectroscopic studies of aluminosilicate liquids. <i>Physics and Chemistry of Minerals</i> , 1995, 22, 74.	0.3	107
10	In situ monitoring by quantitative Raman spectroscopy of alcoholic fermentation by <i>Saccharomyces cerevisiae</i> under high pressure. <i>Extremophiles</i> , 2007, 11, 445-452.	0.9	103
11	Pressure as an environmental parameter for microbial life " A review. <i>Biophysical Chemistry</i> , 2013, 183, 30-41.	1.5	99
12	A new natural high-pressure (Na,Ca)-hexaluminosilicate [(CaxNa1-x)Al3+xSi3-xO11] in shocked Martian meteorites. <i>Earth and Planetary Science Letters</i> , 2004, 219, 1-12.	1.8	86
13	Raman spectroscopy, x-ray diffraction, and phase relationship determinations with a versatile heating cell for measurements up to 3600 K (or 2700 K in air). <i>Journal of Applied Physics</i> , 1993, 74, 5451-5456.	1.1	72
14	Phase transformations of subducted basaltic crust in the upmost lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , 2006, 157, 139-149.	0.7	72
15	Kinetics of the Coesite-Quartz Transition: Application to the Exhumation of Ultrahigh-Pressure Rocks. <i>Journal of Petrology</i> , 2003, 44, 773-788.	1.1	71
16	Serpentinites from Central Cuba: petrology and HRTEM study. <i>European Journal of Mineralogy</i> , 2002, 14, 905-914.	0.4	62
17	Equation of state of antigorite, stability field of serpentines, and seismicity in subduction zones. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	62
18	Aluminum speeds up the hydrothermal alteration of olivine. <i>American Mineralogist</i> , 2013, 98, 1738-1744.	0.9	60

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19	Boron isotopic fractionation between minerals and fluids: New insights from in situ high pressure-high temperature vibrational spectroscopic data. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 4301-4313.	1.6	57
20	A thermodynamic model for MgSiO ₃ -perovskite derived from pressure, temperature and volume dependence of the Raman mode frequencies. <i>Physics of the Earth and Planetary Interiors</i> , 2000, 117, 361-384.	0.7	55
21	High-pressure behavior of anorthite: Compression and amorphization. <i>Journal of Geophysical Research</i> , 1997, 102, 10313-10325.	3.3	51
22	Equations of state of ¹² C and ¹³ C diamond. <i>Physical Review B</i> , 1999, 60, 14660-14664.	1.1	51
23	High-pressure and high-temperature Raman spectroscopy of carbonate ions in aqueous solution. <i>Chemical Geology</i> , 2004, 207, 47-58.	1.4	51
24	Adsorption of nucleotides onto ferromagnesian phyllosilicates: Significance for the origin of life. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 176, 81-95.	1.6	51
25	Raman spectroscopic study of structural changes in calcium aluminate (CaAl ₂ O ₄) glass at high pressure and high temperature. <i>Chemical Geology</i> , 1996, 128, 5-15.	1.4	49
26	Adsorption of nucleotides onto Fe-Mg-Al rich swelling clays. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 120, 97-108.	1.6	49
27	Equations of state of ice VI and ice VII at high pressure and high temperature. <i>Journal of Chemical Physics</i> , 2014, 141, 104505.	1.2	49
28	Subduction hides high-pressure sources of energy that may feed the deep subsurface biosphere. <i>Nature Communications</i> , 2020, 11, 3880.	5.8	48
29	Hydration of the bromine ion in a supercritical 1:1 aqueous electrolyte. <i>Physical Review B</i> , 2001, 63, .	1.1	45
30	Dissolution of strontianite at high P-T conditions: An in-situ synchrotron X-ray fluorescence study. <i>American Mineralogist</i> , 2003, 88, 978-985.	0.9	45
31	Equations of State and the relative stabilities of serpentine varieties. <i>Physics and Chemistry of Minerals</i> , 2006, 33, 629-637.	0.3	45
32	An in-situ high-temperature structural study of stable and metastable CaAl ₂ Si ₂ O ₈ polymorphs. <i>Mineralogical Magazine</i> , 1995, 59, 25-33.	0.6	42
33	Influence of NaCl on ice VI and ice VII melting curves up to 6GPa, implications for large icy moons. <i>Icarus</i> , 2013, 226, 355-363.	1.1	42
34	Equation of state of Al-bearing perovskite to lower mantle pressure conditions. <i>Geophysical Research Letters</i> , 2001, 28, 3789-3792.	1.5	41
35	Immiscible hydrocarbon fluids in the deep carbon cycle. <i>Nature Communications</i> , 2017, 8, 15798.	5.8	40
36	High-pressure behaviour of lawsonite: a phase transition at 8.6 GPa. <i>European Journal of Mineralogy</i> , 2000, 12, 721-733.	0.4	39

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37	Salt partitioning between water and high-pressure ices. Implication for the dynamics and habitability of icy moons and water-rich planetary bodies. <i>Earth and Planetary Science Letters</i> , 2017, 463, 36-47.	1.8	39
38	Cycling phosphorus on the Archean Earth: Part II. Phosphorus limitation on primary production in Archean ecosystems. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 280, 360-377.	1.6	39
39	Analytical transmission electron microscopy study of a natural MORB sample assemblage transformed at high pressure and high temperature. <i>American Mineralogist</i> , 2008, 93, 144-153.	0.9	38
40	Carbon speciation in saline solutions in equilibrium with aragonite at high pressure. <i>Chemical Geology</i> , 2016, 431, 44-53.	1.4	38
41	Cycling phosphorus on the Archean Earth: Part I. Continental weathering and riverine transport of phosphorus. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 273, 70-84.	1.6	36
42	Anharmonic properties of Mg ₂ SiO ₄ -forsterite measured from the volume dependence of the Raman spectrum. <i>European Journal of Mineralogy</i> , 1997, 9, 255-262.	0.4	36
43	Kinetics and mechanism of antigorite dehydration: Implications for subduction zone seismicity. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	35
44	Raman spectroscopy at mantle pressure and temperature conditions experimental setâ€p and the example of CaTiO ₃ perovskite. <i>Geophysical Research Letters</i> , 1993, 20, 1931-1934.	1.5	31
45	The quest for ion pairing in supercritical aqueous electrolytes. <i>Journal of Molecular Liquids</i> , 2002, 101, 127-136.	2.3	31
46	Development of a low-pressure diamond anvil cell and analytical tools to monitor microbial activities in situ under controlled P and T. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2006, 1764, 434-442.	1.1	31
47	The influence of high hydrostatic pressure on bacterial dissimilatory iron reduction. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 88, 120-129.	1.6	31
48	Effect of aluminium on the compressibility of silicate perovskite. <i>Geophysical Research Letters</i> , 2004, 31, .	1.5	29
49	Optimization of Sm ³⁺ fluorescence in Sm-doped yttrium aluminum garnet: Application to pressure calibration in diamond-anvil cell at high temperature. <i>Journal of Applied Physics</i> , 2002, 92, 4349-4353.	1.1	27
50	Dehydration kinetics of talc and 10Å... phase: Consequences for subduction zone seismicity. <i>Earth and Planetary Science Letters</i> , 2009, 284, 57-64.	1.8	27
51	How do Nucleotides Adsorb Onto Clays?. <i>Life</i> , 2018, 8, 59.	1.1	27
52	A diamond anvil cell for x-ray fluorescence measurements of trace elements in fluids at high pressure and high temperature. <i>Review of Scientific Instruments</i> , 2009, 80, 033906.	0.6	25
53	A Review of H ₂ , CH ₄ , and Hydrocarbon Formation in Experimental Serpentinization Using Network Analysis. <i>Frontiers in Earth Science</i> , 2020, 8, .	0.8	24
54	Effects of salinity on the adsorption of nucleotides onto phyllosilicates. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 1938-1952.	1.3	22

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55	Iron reduction by the deep-sea bacterium <i>Shewanella profunda</i> LT13a under subsurface pressure and temperature conditions. <i>Frontiers in Microbiology</i> , 2014, 5, 796.	1.5	21
56	P-V-T equation of state of lawsonite. <i>Physics and Chemistry of Minerals</i> , 1999, 26, 406-414.	0.3	19
57	Mechanism and kinetics of the Fe^{2+} transition in San Carlos olivine $\text{Mg}_{1.8}\text{Fe}_{0.2}\text{SiO}_4$. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 110-119.	1.4	19
58	Elasticity and dislocations in ice X under pressure. <i>Physics of the Earth and Planetary Interiors</i> , 2014, 236, 10-15.	0.7	18
59	Contrasted effect of aluminum on the serpentinization rate of olivine and orthopyroxene under hydrothermal conditions. <i>Chemical Geology</i> , 2016, 441, 256-264.	1.4	18
60	Water Dynamics in <i>Shewanella oneidensis</i> at Ambient and High Pressure using Quasi-Elastic Neutron Scattering. <i>Scientific Reports</i> , 2016, 6, 18862.	1.6	18
61	Laboratory investigation of high pressure survival in <i>Shewanella oneidensis</i> MR-1 into the gigapascal pressure range. <i>Frontiers in Microbiology</i> , 2014, 5, 612.	1.5	17
62	Synchrotron IR study of hydrous ringwoodite ($^3\text{Mg}_2\text{SiO}_4$) up to 30 GPa. <i>Physics and Chemistry of Minerals</i> , 2006, 33, 502-510.	0.3	16
63	A sensitive pressure sensor for diamond anvil cell experiments up to 2GPa: FluoSpheres®. <i>Journal of Applied Physics</i> , 2006, 100, 034915.	1.1	15
64	A Novel SERRS Sandwich-Hybridization Assay to Detect Specific DNA Target. <i>PLoS ONE</i> , 2011, 6, e17847.	1.1	15
65	Transition Metals Enhance the Adsorption of Nucleotides onto Clays: Implications for the Origin of Life. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 109-119.	1.2	15
66	Pulsated Global Hydrogen and Methane Flux at Mid-Ocean Ridges Driven by Pangea Breakup. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008869.	1.0	15
67	Monitoring microbial redox transformations of metal and metalloid elements under high pressure using <i>in situ</i> X-ray absorption spectroscopy. <i>Geobiology</i> , 2011, 9, 196-204.	1.1	14
68	In situ micro X-ray absorption near edge structure study of microbiologically reduced selenite (SeO_3^{2-}). <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2004, 59, 1681-1686.	1.5	12
69	Adsorption of nucleotides on clay surfaces: Effects of mineral composition, pH and solution salts. <i>Applied Clay Science</i> , 2020, 190, 105544.	2.6	10
70	Micro-X-ray absorption near edge structure as a suitable probe to monitor live organisms. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2008, 63, 512-517.	1.5	9
71	Detection of nucleotides adsorbed onto clay by UV resonant raman spectroscopy: A step towards the search for biosignatures on Mars. <i>Applied Clay Science</i> , 2021, 200, 105824.	2.6	9
72	Progress in quantitative elemental analyses in high pressure fluids using synchrotron x-ray fluorescence (SXRF). <i>Journal of Physics Condensed Matter</i> , 2004, 16, S1197-S1206.	0.7	8

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73	Perspectives on heterococcolith geochemical proxies based on high-resolution X-ray fluorescence mapping. <i>Geobiology</i> , 2016, 14, 390-403.	1.1	8
74	Kinetics of the olivine-ringwoodite transformation and seismic attenuation in the Earth's mantle transition zone. <i>Earth and Planetary Science Letters</i> , 2016, 433, 360-369.	1.8	8
75	Spontaneous Polymerization of Glycine under Hydrothermal Conditions. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 1669-1677.	1.2	8
76	The Italian Solfatara as an analog for Mars fumarolic alteration. <i>American Mineralogist</i> , 2019, 104, 1565-1577.	0.9	8
77	Detection of DNA Sequences Refractory to PCR Amplification Using a Biophysical SERRS Assay (Surface T-j ETQq1 1,0.784314 rgBT /Ov	1.1	7
78	Pressure effects on sulfur-oxidizing activity of <i>Thiobacillus thioparus</i> . <i>Environmental Microbiology Reports</i> , 2021, 13, 169-175.	1.0	7
79	Determination of trace element partition coefficients between water and minerals by high-pressure and high-temperature experiments: Leaching technique. <i>Geochemistry, Geophysics, Geosystems</i> , 2005, 6, n/a-n/a.	1.0	6
80	In situ Raman and X-ray spectroscopies to monitor microbial activities under high hydrostatic pressure. <i>Annals of the New York Academy of Sciences</i> , 2010, 1189, 113-120.	1.8	5
81	Enzyme-free detection and quantification of double-stranded nucleic acids. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 404, 415-422.	1.9	5
82	19. High-Pressure Biochemistry and Biophysics. , 2013, , 607-648.		5
83	Structural changes in perylene from UV Raman spectroscopy up to 1 GPa. <i>Journal of Raman Spectroscopy</i> , 2016, 47, 720-725.	1.2	5
84	Compatibility of Amino Acids in Ice Ih: Implications for the Origin of Life. <i>Astrobiology</i> , 2018, 18, 381-392.	1.5	4
85	Porosity evolution of expanded vermiculite under pressure: the effect of pre-compaction. <i>SN Applied Sciences</i> , 2019, 1, 1.	1.5	4
86	Dataset for H ₂ , CH ₄ and organic compounds formation during experimental serpentinization. <i>Geoscience Data Journal</i> , 2021, 8, 90-100.	1.8	4
87	Origin of manganese in nanofossil calcite based on synchrotron nanoxrf and xanes. <i>Marine Micropaleontology</i> , 2021, 163, 101961.	0.5	4
88	Evidence of high Sr/Ca in a Middle Jurassic murolith coccolith species. , 0, 1, .		3
89	The Genetics, Biochemistry, and Biophysics of Carbon Cycling by Deep Life. , 2019, , 556-584.		1
90	Shear wave velocities across the olivine-wadsleyite-ringwoodite transitions and sharpness of the 410 km seismic discontinuity. <i>Earth and Planetary Science Letters</i> , 2022, 593, 117690.	1.8	1

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91	Raman spectroscopy in biogeology and astrobiology. , 0, , 391-413.		0