

Lorenzo Ulivi

List of Publications by Year in descending order

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118
papers

2,150
citations

218592

26
h-index

276775

41
g-index

118
all docs

118
docs citations

118
times ranked

1747
citing authors

#	ARTICLE	IF	CITATIONS
1	The $\hat{\mu}$ Phase of Solid Oxygen: Evidence of an O ₄ Molecule Lattice. <i>Physical Review Letters</i> , 1999, 83, 4093-4096.	2.9	147
2	New porous water ice metastable at atmospheric pressure obtained by emptying a hydrogen-filled ice. <i>Nature Communications</i> , 2016, 7, 13394.	5.8	106
3	High-pressure phases of solid nitrogen by Raman and infrared spectroscopy. <i>Journal of Chemical Physics</i> , 2000, 112, 8522-8529.	1.2	97
4	Quantum rattling of molecular hydrogen in clathrate hydrate nanocavities. <i>Physical Review B</i> , 2007, 76, .	1.1	82
5	Pressure Tuning of Electron-Phonon Coupling: The Insulator to Metal Transition in Manganites. <i>Physical Review Letters</i> , 2003, 91, 175501.	2.9	75
6	Equation of state of ⁷ LiH and ⁷ LiD from x-ray diffraction to 94 GPa. <i>Physical Review B</i> , 1998, 57, 10403-10406.	1.1	65
7	Cubic ice Ic without stacking defects obtained from ice XVII. <i>Nature Materials</i> , 2020, 19, 663-668.	13.3	64
8	Stochastic-time description of transitions in unstable and multistable systems. <i>Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods</i> , 1982, 71, 119-154.	0.2	61
9	Low temperature Raman spectra of hydrogen in simple and binary clathrate hydrates. <i>Journal of Chemical Physics</i> , 2008, 129, 084705.	1.2	57
10	Direct Determination of the Magnetic Structure of the Delta Phase of Oxygen. <i>Physical Review Letters</i> , 2004, 93, 055502.	2.9	56
11	Quantum calculation of inelastic neutron scattering spectra of a hydrogen molecule inside a nanoscale cavity based on rigorous treatment of the coupled translation-rotation dynamics. <i>Physical Review B</i> , 2011, 83, .	1.1	52
12	High pressure crystal phases of solid CH ₄ probed by Fourier transform infrared spectroscopy. <i>Journal of Chemical Physics</i> , 1995, 103, 1353-1360.	1.2	50
13	Concave gold nanocube assemblies as nanotraps for surface-enhanced Raman scattering-based detection of proteins. <i>Nanoscale</i> , 2015, 7, 3474-3480.	2.8	43
14	Refined Structure of Metastable Ice XVII from Neutron Diffraction Measurements. <i>Journal of Physical Chemistry C</i> , 2016, 120, 26955-26959.	1.5	43
15	Ferroelastic phase transition in rutile-type germanium dioxide at high pressure. <i>Physical Review B</i> , 1998, 58, R2909-R2912.	1.1	39
16	Infrared and Raman studies on high pressure phases of solid N ₂ : An intermediate structural modification between $\hat{\mu}$ and $\hat{\nu}$ phases. <i>Journal of Chemical Physics</i> , 1998, 108, 6849-6856.	1.2	37
17	Depolarized-light-scattering spectrum of normal gaseous hydrogen at low density and a temperature of 297 K. <i>Physical Review A</i> , 1988, 37, 4133-4144.	1.0	36
18	Spectroscopic study of the $\hat{\mu}$ phase of solid oxygen. <i>Physical Review B</i> , 2001, 63, .	1.1	34

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19	Neutron Scattering Measurements and Computation of the Quantum Dynamics of Hydrogen Molecules Trapped in the Small and Large Cages of Clathrate Hydrates. <i>Journal of Physical Chemistry A</i> , 2013, 117, 7314-7326.	1.1	33
20	Crystal structure of solid oxygen at high pressure and low temperature. <i>Physical Review B</i> , 2002, 65, .	1.1	32
21	Inelastic neutron scattering from hydrogen clathrate hydrates. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 104242.	0.7	32
22	Rigorous quantum treatment of inelastic neutron scattering spectra of a heteronuclear diatomic molecule in a nanocavity: HD in the small cage of structure II clathrate hydrate. <i>Chemical Physics Letters</i> , 2013, 563, 1-8.	1.2	32
23	Antiferromagnetism in the high-pressure phases of solid oxygen: Low-energy electronic transitions. <i>Physical Review B</i> , 2001, 64, .	1.1	31
24	Vibrational hyperpolarizability of SF ₆ . <i>Journal of Chemical Physics</i> , 1988, 89, 149-155.	1.2	29
25	Vibrational Modes of Hydrogen Hydrates: A First-Principles Molecular Dynamics and Raman Spectra Study. <i>Journal of Physical Chemistry C</i> , 2017, 121, 3690-3696.	1.5	29
26	High Resolution Raman and Neutron Investigation of Mg(BH ₄) ₂ in an Extensive Temperature Range. <i>Journal of Physical Chemistry A</i> , 2010, 114, 2788-2793.	1.1	28
27	Spectroscopic studies of the Ar(H ₂) ₂ compound crystal at high pressure and low temperatures. <i>Physical Review B</i> , 1999, 60, 6502-6512.	1.1	22
28	Collision-induced raman scattering of hydrogen at various temperatures. <i>Chemical Physics Letters</i> , 1985, 117, 247-250.	1.2	21
29	Depolarized-light-scattering spectrum from gaseous hydrogen at 50 K: The density-squared component. <i>Physical Review A</i> , 1990, 42, 6916-6919.	1.0	20
30	Density behavior of the double rotational transition in liquid parahydrogen. <i>Physical Review A</i> , 1996, 53, R1935-R1938.	1.0	20
31	Molecular hydrogen internuclear distance in high-pressure fluid and solid phases at room temperature. <i>Physical Review B</i> , 1998, 58, 2383-2386.	1.1	20
32	Antiferromagnetic order in the I _h phase of solid oxygen. <i>Physical Review B</i> , 2000, 62, R3604-R3607.	1.1	20
33	Experimental inelastic neutron scattering spectrum of hydrogen hexagonal clathrate-hydrate compared with rigorous quantum simulations. <i>Journal of Chemical Physics</i> , 2013, 139, 164507.	1.2	20
34	Simple-to-Complex Transformation in Liquid Rubidium. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 2909-2913.	2.1	20
35	Temperature dependence of the collisional interference in the pure rotational far-infrared spectrum of HD. <i>Physical Review A</i> , 1989, 40, 642-651.	1.0	19
36	High temperature structures and orientational disorder in compressed solid nitrogen. <i>Journal of Chemical Physics</i> , 2005, 122, 074701.	1.2	19

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37	Raman Measurements of Pure Hydrogen Clathrate Formation from a Supercooled Hydrogenâ€“Water Solution. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 4309-4313.	2.1	19
38	Pure rotational spectrum of hydrogen deuteride by far-infrared Fourier transform spectroscopy. <i>Astrophysical Journal</i> , 1991, 378, L29.	1.6	19
39	High-pressure and low-temperature infrared study of solid oxygen: Evidence of a new crystal structure. <i>Physical Review B</i> , 1999, 60, 6179-6182.	1.1	18
40	Experimental and theoretical analysis of the rotational Raman spectrum of hydrogen molecules in clathrate hydrates. <i>Journal of Chemical Physics</i> , 2011, 135, 054506.	1.2	18
41	Impact of the Condensed-Phase Environment on the Translationâ€“Rotation Eigenstates and Spectra of a Hydrogen Molecule in Clathrate Hydrates. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 308-313.	2.1	18
42	High pressure synthesis and <i>in situ</i> Raman spectroscopy of H ₂ and HD clathrate hydrates. <i>Journal of Chemical Physics</i> , 2012, 137, 164320.	1.2	16
43	Phonon density of states in different clathrate hydrates measured by inelastic neutron scattering. <i>Journal of Physics: Conference Series</i> , 2012, 340, 012051.	0.3	16
44	The HD molecule in small and medium cages of clathrate hydrates: Quantum dynamics studied by neutron scattering measurements and computation. <i>Journal of Chemical Physics</i> , 2014, 141, 134501.	1.2	16
45	Third virial coefficients of collision-induced, depolarized light scattering of hydrogen. <i>Physical Review A</i> , 1991, 44, 4450-4458.	1.0	14
46	Temperature dependence of the pure rotational band of HD: Interference, widths, and shifts. <i>Physical Review A</i> , 1993, 47, 1159-1173.	1.0	14
47	Study of the energy level scheme of under pressure. <i>Journal of Physics Condensed Matter</i> , 1998, 10, 9329-9342.	0.7	14
48	Deformation potentials of the semimetal HgTe. <i>Physical Review B</i> , 2005, 71, .	1.1	14
49	Raman spectroscopy study of molecular hydrogen solubility in water at high pressure. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 7951-7955.	3.8	14
50	Intermolecular interactions in the $\hat{\mu}$ phase of solid oxygen studied by infrared spectroscopy. <i>Physica B: Condensed Matter</i> , 1999, 265, 49-53.	1.3	13
51	Hydrogen-storage materials dispersed into nanoporous substrates studied through incoherent inelastic neutron scattering. <i>Journal of Alloys and Compounds</i> , 2012, 538, 91-99.	2.8	13
52	Ice XVII as a Novel Material for Hydrogen Storage. <i>Challenges</i> , 2017, 8, 3.	0.9	13
53	Intercollisional Interference Effect in the Light Scattering Spectrum of Xenon Gas. <i>Physical Review Letters</i> , 1995, 75, 3094-3097.	2.9	12
54	An apparatus for simultaneous thermodynamic and optical measurements, with large temperature excursions. <i>Review of Scientific Instruments</i> , 2008, 79, 013105.	0.6	12

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55	Ne- and O ₂ -filled ice XVII: a neutron diffraction study. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 14671-14677.	1.3	12
56	High temperature study of the Raman-active phonon modes of YBa ₂ Cu ₃ O _{7-δ} . <i>Solid State Communications</i> , 1995, 93, 519-523.	0.9	11
57	Vibrational Spectra of Nitrogen in Simple Mixtures at High Pressures. <i>International Journal of Thermophysics</i> , 1999, 20, 867-876.	1.0	11
58	The S O (0) structure in highly compressed hydrogen and the orientational transition. <i>Europhysics Letters</i> , 2004, 68, 664-670.	0.7	11
59	Extended infrared absorption spectroscopy study of the magnetic properties of solid oxygen at high-pressure and low-temperature. <i>Physical Review B</i> , 2008, 77, .	1.1	11
60	High pressure optical cell for synthesis and <i>in situ</i> Raman spectroscopy of hydrogen clathrate hydrates. <i>Review of Scientific Instruments</i> , 2012, 83, 113101.	0.6	11
61	Spectroscopic and thermodynamic properties of molecular hydrogen dissolved in water at pressures up to 200 MPa. <i>Journal of Chemical Physics</i> , 2014, 140, 164312.	1.2	11
62	Local structure of solid Rb at megabar pressures. <i>Journal of Chemical Physics</i> , 2015, 142, 214503.	1.2	11
63	Raman Investigation of the Ice Ic→Ice Ih Transformation. <i>Journal of Physical Chemistry C</i> , 2020, 124, 17135-17140.	1.5	11
64	Interaction-induced light scattering by gaseous methane: The bound dimer contribution (CH ₄) ₂ . <i>Physical Review A</i> , 1994, 50, 1172-1177.	1.0	10
65	Raman and Inelastic Neutron Scattering Study on a Melt-Infiltrated Composite of NaAlH ₄ and Nanoporous Carbon. <i>Journal of Physical Chemistry A</i> , 2011, 115, 7503-7510.	1.1	10
66	The three-body correlation spectral moments in depolarized interaction-induced light scattering of H ₂ at 297 K. <i>Chemical Physics Letters</i> , 1987, 138, 559-564.	1.2	9
67	Hyperacoustic velocity of fluid hydrogen at high pressure. <i>Journal of Physics Condensed Matter</i> , 1997, 9, 10059-10064.	0.7	9
68	Density evolution of the double rotational transition in condensed parahydrogen. <i>Physical Review B</i> , 1997, 55, 12223-12234.	1.1	9
69	Measurement of the ortho-to-para hydrogen conversion in the high-pressure compound Ar(H ₂) ₂ . <i>Europhysics Letters</i> , 2000, 52, 564-570.	0.7	9
70	Dynamics of hydrogen guests in ice XVII nanopores. <i>Physical Review Materials</i> , 2017, 1, .	0.9	9
71	Investigation of thermoluminescent properties of synthetic (CVD) diamond. <i>Il Nuovo Cimento A</i> , 1996, 109, 1277-1288.	0.2	8
72	Temperature Behavior of the AlH ₃ Polymorph by <i>in Situ</i> Investigation Using High Resolution Raman Scattering. <i>Journal of Physical Chemistry A</i> , 2011, 115, 691-699.	1.1	7

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73	Electrochemically Deposited Gentamicin-Loaded Calcium phosphate Coatings for Bone Tissue Integration. <i>International Journal of Artificial Organs</i> , 2012, 35, 876-883.	0.7	7
74	Three-body correlation spectra from collision-induced light scattering by SF ₆ and CF ₄ . <i>Molecular Physics</i> , 1991, 72, 345-352.	0.8	6
75	The third virial coefficient of depolarized-light-scattering spectral moments for moderately quantum systems. <i>Molecular Physics</i> , 1993, 79, 179-196.	0.8	6
76	Anisotropic Interactions of Hydrogen Molecules from the Pressure Dependence of the Rotational Spectrum in the Ar(H ₂) ₂ Compound. <i>Physical Review Letters</i> , 2001, 87, 125506.	2.9	6
77	Stochastic time approach to the decay of unstable states: Failure of the asymptotic approximation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1982, 87, 333-335.	0.9	5
78	Three-body depolarized interaction-induced light-scattering spectrum of neon. <i>Physical Review A</i> , 1994, 49, 4602-4609.	1.0	5
79	Polarizability of a pair of hydrogen molecules. <i>Molecular Physics</i> , 1997, 90, 971-978.	0.8	5
80	Rotational and vibrational excitations in solid parahydrogen. <i>Physical Review B</i> , 1998, 58, 234-241.	1.1	5
81	Roton excitations of the hydrogen molecule in the Ar(H ₂) ₂ compound. <i>Physical Review B</i> , 2002, 66, .	1.1	5
82	Single shot measurements of angular radiation characteristics of flash-lamps. <i>Optics Communications</i> , 1991, 81, 157-161.	1.0	4
83	FTIR Study of Electronic Transitions in Solid Oxygen at High Pressure and Low Temperature. <i>Journal of Low Temperature Physics</i> , 2001, 122, 323-330.	0.6	4
84	Lattice dynamics and molecular rotations in solid hydrogen deuteride: Inelastic neutron scattering study. <i>Physical Review B</i> , 2009, 79, .	1.1	4
85	Irreversible structural changes of recovered hydrogen hydrate transforming from CO phase to ice XVII. <i>Chemical Physics</i> , 2021, 544, 111092.	0.9	4
86	Density of Phonon States in Cubic Ice Ic. <i>Journal of Physical Chemistry C</i> , 2021, 125, 23533-23538.	1.5	4
87	A simple model of the wavelength dependent angular radiation characteristics of flash-lamps. <i>Optics Communications</i> , 1994, 110, 321-326.	1.0	3
88	Simple and Binary Hydrogen Clathrate Hydrates: Synthesis and Microscopic Characterization through Neutron and Raman Scattering. <i>Advances in Science and Technology</i> , 0, , .	0.2	3
89	Depolarized interaction-induced light scattering in dense phases. <i>Journal of the Chemical Society, Faraday Transactions 2</i> , 1987, 83, 1751.	1.1	2
90	Infrared Studies of Ar(H ₂) ₂ at Low Temperature and High Pressure. <i>Journal of Low Temperature Physics</i> , 1998, 111, 703-708.	0.6	2

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91	Extended spectroscopic studies of Ar(H ₂) ₂ at high pressure and low temperature. Physica B: Condensed Matter, 1999, 265, 39-48.	1.3	2
92	Pressure-Induced Charge Delocalization in Manganites Studied by Means of Infrared Spectroscopy. High Pressure Research, 2002, 22, 139-142.	0.4	2
93	X-ray Diffraction of Oxygen Under Pressure in a Neon Medium. High Pressure Research, 2002, 22, 13-16.	0.4	2
94	Far infrared phonons of solid iodine under pressure. Chemical Physics Letters, 2003, 378, 105-110.	1.2	2
95	Phase transitions of carbon tetra-fluoride using raman spectroscopy and molecular dynamics simulations. High Pressure Research, 2006, 26, 383-386.	0.4	2
96	Importance of anisotropic three-body forces in solid hydrogen. Physical Review B, 2006, 73, .	1.1	2
97	Quantum confinement of hydrogen in ice based clathrates. Journal of Physics: Conference Series, 2009, 177, 012013.	0.3	2
98	High-pressure vibrational properties of dense rubidium. Physical Review B, 2018, 98, .	1.1	2
99	Interference of Allowed and Collision-Induced Transitions in HD: Experiment. , 1995, , 407-416.		2
100	Collisional interference in the infrared absorption spectrum of HD. AIP Conference Proceedings, 1990, , .	0.3	1
101	Direct investigation of the oxidation of YBCO by in situ Raman spectroscopy. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1777-1784.	0.4	1
102	Ortho- to Para-Hydrogen Conversion and Molecular Diffusion in the High Pressure Compound Ar(H ₂) ₂ . J. Chem. Phys. 1994, 101, 1047-1054.	0.4	1
103	Evidence of Phase Separation in the P-T Phase Diagram of the La _{0.75} Ca _{0.25} MnO ₃ Manganite by Infrared Measurements. Journal of Superconductivity and Novel Magnetism, 2005, 18, 659-662.	0.5	1
104	Pressure dependence of intersubband transitions in HgTe/Hg _{0.3} Cd _{0.7} Te superlattices. Journal of Electronic Materials, 2005, 34, 811-814.	1.0	1
105	The S ₀ (0) Roton Structure in Highly Compressed Hydrogen. Journal of Low Temperature Physics, 2005, 139, 773-782.	0.6	1
106	Inelastic neutron scattering and raman light scattering from hydrogen-filled clathrates hydrates. Journal of Physics: Conference Series, 2008, 121, 042018.	0.3	1
107	Comment on "Quantum Density Fluctuations in Classical Liquids". Physical Review Letters, 2011, 106, 038901; author reply 038902.	2.9	1
108	Theory I. Applied Physics B, Photophysics and Laser Chemistry, 1982, 28, 163-171.	1.5	0

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109	Raman microprobe technique diagnostic of YBCO films produced by laser ablation. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 2011-2017.	0.4	0
110	Double rotovibrational transitions in solid hydrogen. AIP Conference Proceedings, 1997, , .	0.3	0
111	Double rotational transitions of molecular hydrogen in the condensed phase. AIP Conference Proceedings, 1997, , .	0.3	0
112	Bound dimer contribution in the collision-induced pair spectrum of mercury vapour. AIP Conference Proceedings, 1997, , .	0.3	0
113	Collision induced light scattering in metal vapors: The mercury spectra. AIP Conference Proceedings, 1997, , .	0.3	0
114	Mixed vibrational and rotational excitations in liquid and solid para-hydrogen. , 1999, , .		0
115	The internuclear distance of molecular hydrogen in the fluid and solid phases at room temperature.. , 1999, , .		0
116	Bidimensional assemblies of nonspherical gold nanoparticles for SERS analysis of biomolecules. , 2015, , .		0
117	Three-Body Cils Spectra of Gases: Experimental. , 1995, , 31-40.		0
118	Pure rotational spectrum of HD by high resolution Fourier transform spectroscopy in the far infrared. , 2017, , .		0