

Milva Celli

List of Publications by Year in descending order

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74
papers

1,483
citations

331670

21
h-index

345221

36
g-index

75
all docs

75
docs citations

75
times ranked

1089
citing authors

#	ARTICLE	IF	CITATIONS
1	TOSCA neutron spectrometer: The final configuration. Applied Physics A: Materials Science and Processing, 2002, 74, s64-s66.	2.3	180
2	New porous water ice metastable at atmospheric pressure obtained by emptying a hydrogen-filled ice. Nature Communications, 2016, 7, 13394.	12.8	106
3	Quantum rattling of molecular hydrogen in clathrate hydrate nanocavities. Physical Review B, 2007, 76, .	3.2	82
4	Cubic ice Ic without stacking defects obtained from ice XVII. Nature Materials, 2020, 19, 663-668.	27.5	64
5	Neutron diffractometer INES for quantitative phase analysis of archaeological objects. Measurement Science and Technology, 2008, 19, 034003.	2.6	60
6	Low temperature Raman spectra of hydrogen in simple and binary clathrate hydrates. Journal of Chemical Physics, 2008, 129, 084705.	3.0	57
7	A new ceramic material for shielding pulsed neutron scattering instruments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 565, 861-863.	1.6	56
8	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. Physical Review B, 2011, 83, .	3.2	52
9	Refined Structure of Metastable Ice XVII from Neutron Diffraction Measurements. Journal of Physical Chemistry C, 2016, 120, 26955-26959.	3.1	43
10	Quantitative multiphase analysis of archaeological bronzes by neutron diffraction. Applied Physics A: Materials Science and Processing, 2002, 74, s1139-s1142.	2.3	40
11	Direct experimental access to microscopic dynamics in liquid hydrogen. Physical Review E, 2002, 66, 021202.	2.1	35
12	Neutron Scattering Measurements and Computation of the Quantum Dynamics of Hydrogen Molecules Trapped in the Small and Large Cages of Clathrate Hydrates. Journal of Physical Chemistry A, 2013, 117, 7314-7326.	2.5	33
13	Inelastic neutron scattering from hydrogen clathrate hydrates. Journal of Physics Condensed Matter, 2008, 20, 104242.	1.8	32
14	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. Chemical Physics Letters, 2013, 563, 1-8.	2.6	32
15	Microscopic structure factor of liquid para-hydrogen. Physical Review B, 2002, 65, .	3.2	31
16	Vibrational Modes of Hydrogen Hydrates: A First-Principles Molecular Dynamics and Raman Spectra Study. Journal of Physical Chemistry C, 2017, 121, 3690-3696.	3.1	29
17	Theory of virial expansion of correlation functions and spectra: Application to interaction-induced spectroscopy. Physical Review A, 1989, 40, 1116-1126.	2.5	25
18	Kinetic energy of ^4He along the $T=6.1\text{K}$ isotherm. Physical Review B, 1998, 58, 242-247.	3.2	25

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19	Experimental determination of the translational kinetic energy of liquid and solid hydrogen. European Physical Journal B, 2000, 14, 239-244.	1.5	25
20	Density dependence of mean kinetic energy in liquid and solid hydrogen at 19.3 K. European Physical Journal B, 2001, 23, 171-178.	1.5	23
21	Microscopic structure factor of liquid hydrogen by neutron-diffraction measurements. Physical Review B, 2005, 71, .	3.2	22
22	Neutron diffraction determination of the thermodynamic derivatives of the microscopic structure of liquid parahydrogen. Physical Review B, 1998, 58, 11905-11910.	3.2	21
23	Density of phonon states in solid parahydrogen from inelastic neutron scattering. Journal of Chemical Physics, 2004, 120, 5657-5663.	3.0	21
24	Experimental inelastic neutron scattering spectrum of hydrogen hexagonal clathrate-hydrate compared with rigorous quantum simulations. Journal of Chemical Physics, 2013, 139, 164507.	3.0	20
25	Deep inelastic neutron scattering on liquid hydrogen in the crossover region between the molecular and atomic regimes. Physical Review B, 1998, 58, 791-797.	3.2	19
26	Raman Measurements of Pure Hydrogen Clathrate Formation from a Supercooled Hydrogenâ€“Water Solution. Journal of Physical Chemistry Letters, 2015, 6, 4309-4313.	4.6	19
27	Microscopic self-dynamics in liquid hydrogen and in its mixtures with deuterium. Physical Review E, 2004, 70, 061202.	2.1	18
28	Experimental and theoretical analysis of the rotational Raman spectrum of hydrogen molecules in clathrate hydrates. Journal of Chemical Physics, 2011, 135, 054506.	3.0	18
29	High pressure synthesis and <i>in situ</i> Raman spectroscopy of H ₂ and HD clathrate hydrates. Journal of Chemical Physics, 2012, 137, 164320.	3.0	16
30	Phonon density of states in different clathrate hydrates measured by inelastic neutron scattering. Journal of Physics: Conference Series, 2012, 340, 012051.	0.4	16
31	The HD molecule in small and medium cages of clathrate hydrates: Quantum dynamics studied by neutron scattering measurements and computation. Journal of Chemical Physics, 2014, 141, 134501.	3.0	16
32	Interaction-induced translational Raman scattering in dense krypton gas: Evidence of irreducible many-body effects. Physical Review A, 1988, 38, 3984-3991.	2.5	15
33	Ice XVII as a Novel Material for Hydrogen Storage. Challenges, 2017, 8, 3.	1.7	13
34	An apparatus for simultaneous thermodynamic and optical measurements, with large temperature excursions. Review of Scientific Instruments, 2008, 79, 013105.	1.3	12
35	Ne- and O ₂ -filled ice XVII: a neutron diffraction study. Physical Chemistry Chemical Physics, 2019, 21, 14671-14677.	2.8	12
36	Microscopic dynamics of liquid hydrogen. Europhysics Letters, 2001, 53, 34-39.	2.0	11

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37	High pressure optical cell for synthesis and <i>in situ</i> Raman spectroscopy of hydrogen clathrate hydrates. Review of Scientific Instruments, 2012, 83, 113101.	1.3	11
38	Spectroscopic and thermodynamic properties of molecular hydrogen dissolved in water at pressures up to 200 MPa. Journal of Chemical Physics, 2014, 140, 164312.	3.0	11
39	Velocity autocorrelation in liquid parahydrogen by quantum simulations for direct parameter-free computations of neutron cross sections. Physical Review B, 2015, 92, .	3.2	11
40	Raman Investigation of the Ice Ice Ih Transformation. Journal of Physical Chemistry C, 2020, 124, 17135-17140.	3.1	11
41	SWCN characterization by neutron diffraction. Physica B: Condensed Matter, 2004, 350, E1027-E1029.	2.7	10
42	Non-Gaussian self-dynamics of liquid hydrogen. Physical Review B, 2011, 84, .	3.2	10
43	Hydrogen self-dynamics in liquid H ₂ /D ₂ mixtures studied through inelastic neutron scattering. Physical Review E, 2015, 92, 012311.	2.1	10
44	Deep inelastic neutron scattering in condensed hydrogen. Physica B: Condensed Matter, 1996, 226, 304-312.	2.7	9
45	Velocity autocorrelation by quantum simulations for direct parameter-free computations of the neutron cross sections. II. Liquid deuterium. Physical Review B, 2016, 93, .	3.2	9
46	Dynamics of hydrogen guests in ice XVII nanopores. Physical Review Materials, 2017, 1, .	2.4	9
47	Collective dynamics of liquid deuterium: Neutron scattering and approximate quantum simulation methods. Physical Review B, 2021, 104, .	3.2	8
48	Lattice vibrations of para-hydrogen impurities in a solid deuterium matrix: An inelastic neutron scattering study. Physical Review B, 2007, 76, .	3.2	7
49	Quantum Mechanical Effects on the Static Structure Factor of Pairs of Orthodeuterium Molecules. Physical Review Letters, 1998, 81, 5828-5831.	7.8	6
50	The Microscopic Dynamics of Liquid and Solid Parahydrogen. Journal of Low Temperature Physics, 2002, 126, 585-590.	1.4	6
51	On the non-Gaussian corrections in the self dynamics of semi-quantum fluids. Chemical Physics, 2015, 446, 57-64.	1.9	6
52	The microscopic structure of the hydrogen liquids. Journal of Physics Condensed Matter, 2003, 15, S107-S112.	1.8	4
53	Structure and purity of single walled carbon nanotube samples. Carbon, 2007, 45, 943-951.	10.3	4
54	Irreversible structural changes of recovered hydrogen hydrate transforming from CO phase to ice XVII. Chemical Physics, 2021, 544, 111092.	1.9	4

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55	Density of Phonon States in Cubic Ice Ic. Journal of Physical Chemistry C, 2021, 125, 23533-23538.	3.1	4
56	Theory of the density expansion of the dynamic structure factor: The pair contribution. Physical Review A, 1992, 46, 7561-7572.	2.5	3
57	Long-range pair potential from the low-density S(k) of 4He around 6K. Physica B: Condensed Matter, 2004, 350, E1059-E1061.	2.7	3
58	Simple and Binary Hydrogen Clathrate Hydrates: Synthesis and Microscopic Characterization through Neutron and Raman Scattering. Advances in Science and Technology, 0, , .	0.2	3
59	An inverse geometry neutron scattering spectrometer with graphite Venetian blind crystal analyser and a para-hydrogen filter. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 441, 494-503.	1.6	2
60	Breakdown of the Gaussian approximation in semi-quantum liquids. Physica B: Condensed Matter, 2004, 350, E1083-E1086.	2.7	2
61	Microscopic self dynamics in liquid hydrogen and in its mixtures with deuterium and neon: a neutron scattering study. Journal of Low Temperature Physics, 2005, 138, 887-892.	1.4	2
62	Quantum confinement of hydrogen in ice based clathrates. Journal of Physics: Conference Series, 2009, 177, 012013.	0.4	2
63	Inelastic neutron scattering from solid molecular hydrogen at various densities. Chemical Physics, 2013, 427, 101-105.	1.9	2
64	Hydrogen self-dynamics in diluted liquid mixtures with neon: An inelastic neutron scattering study. Physical Review E, 2019, 99, 012138.	2.1	2
65	Neutron diffraction study of quantum effects on the pair correlation function of low-density 4 He. Applied Physics A: Materials Science and Processing, 2002, 74, s418-s420.	2.3	1
66	The total neutron cross-section of an ortho-para mixture of gaseous hydrogen at 75K. Physica B: Condensed Matter, 2004, 350, E1063-E1065.	2.7	1
67	Inelastic neutron scattering and raman light scattering from hydrogen-filled clathrates hydrates. Journal of Physics: Conference Series, 2008, 121, 042018.	0.4	1
68	Neutron study of non-Gaussian self dynamics in liquid parahydrogen. Journal of Physics: Conference Series, 2012, 340, 012076.	0.4	1
69	VSI@ESS: Case study for a vibrational spectroscopy instrument at the european spallation source. EPJ Web of Conferences, 2015, 83, 03021.	0.3	1
70	The measurement of the translational kinetic energy of liquid hydrogen using TOSCA. Physica B: Condensed Matter, 2000, 276-278, 814-815.	2.7	0
71	The microscopic dynamics of condensed parahydrogen. Applied Physics A: Materials Science and Processing, 2002, 74, s430-s432.	2.3	0
72	The Microscopic Structure of Hydrogens in the Liquid Phase. Journal of Low Temperature Physics, 2002, 126, 579-584.	1.4	0

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73	The static structure factor of hydrogen in the liquid state. Physica B: Condensed Matter, 2004, 350, E1067-E1069.	2.7	0
74	Hydrogen and Hydrogen-Storage Materials. Neutron Scattering Applications and Techniques, 2007, , 417-437.	0.2	0