

Mauro Rovere

List of Publications by Year in descending order

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107
papers

3,541
citations

117625

34
h-index

144013

57
g-index

108
all docs

108
docs citations

108
times ranked

2054
citing authors

#	ARTICLE	IF	CITATIONS
1	Structure and dynamics of molten salts. Reports on Progress in Physics, 1986, 49, 1001-1081.	20.1	218
2	Glass transition and layering effects in confined water: A computer simulation study. Journal of Chemical Physics, 2000, 113, 11324-11335.	3.0	172
3	Dynamic Crossover in Supercooled Confined Water: Understanding Bulk Properties through Confinement. Journal of Physical Chemistry Letters, 2010, 1, 729-733.	4.6	148
4	The gas-liquid transition of the two-dimensional Lennard-Jones fluid. Journal of Physics Condensed Matter, 1990, 2, 7009-7032.	1.8	147
5	Layer analysis of the structure of water confined in vycor glass. Journal of Chemical Physics, 2002, 116, 342.	3.0	143
6	Supercooled Confined Water and the Mode Coupling Crossover Temperature. Physical Review Letters, 2000, 85, 4317-4320.	7.8	142
7	A molecular dynamics simulation of water confined in a cylindrical SiO ₂ pore. Journal of Chemical Physics, 1998, 108, 9859-9867.	3.0	127
8	Widom line and dynamical crossovers as routes to understand supercritical water. Nature Communications, 2014, 5, 5806.	12.8	116
9	Block Density Distribution Function Analysis of Two-Dimensional Lennard-Jones Fluids. Europhysics Letters, 1988, 6, 585-590.	2.0	104
10	A route to explain water anomalies from results on an aqueous solution of salt. Journal of Chemical Physics, 2010, 132, 134508.	3.0	99
11	Modifications of the hydrogen bond network of liquid water in a cylindrical SiO ₂ pore. Journal of Molecular Liquids, 2000, 85, 127-137.	4.9	92
12	Confined water in the low hydration regime. Journal of Chemical Physics, 2002, 117, 369-375.	3.0	86
13	Ion hydration and structural properties of water in aqueous solutions at normal and supercooled conditions: a test of the structure making and breaking concept. Physical Chemistry Chemical Physics, 2011, 13, 19814.	2.8	75
14	Water in confined geometries: experiments and simulations. Journal of Physics Condensed Matter, 2000, 12, A345-A350.	1.8	74
15	Water in porous glasses. A computer simulation study. Journal of Molecular Liquids, 1999, 80, 165-178.	4.9	65
16	Mode coupling theory and fragile to strong transition in supercooled TIP4P/2005 water. Journal of Chemical Physics, 2016, 144, 074503.	3.0	63
17	High precision determination of the melting points of water TIP4P/2005 and water TIP4P/Ice models by the direct coexistence technique. Journal of Chemical Physics, 2017, 147, 244506.	3.0	60
18	Simulation studies of gas-liquid transitions in two dimensions via a subsystem-block-density distribution analysis. European Physical Journal B, 1993, 90, 215-228.	1.5	58

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19	Mode coupling and fragile to strong transition in supercooled TIP4P water. <i>Journal of Chemical Physics</i> , 2012, 137, 164503.	3.0	58
20	Effects of confinement on static and dynamical properties of water. <i>European Physical Journal E</i> , 2003, 12, 77-81.	1.6	53
21	Spontaneous NaCl-doped ice at seawater conditions: focus on the mechanisms of ion inclusion. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 9566-9574.	2.8	53
22	Non-exponential kinetic behaviour of confined water. <i>Europhysics Letters</i> , 2000, 49, 183-188.	2.0	52
23	On the density-wave theory of classical Wigner crystallisation. <i>Journal of Physics C: Solid State Physics</i> , 1985, 18, 3445-3455.	1.5	50
24	Anomalous dynamics of confined water at low hydration. <i>Journal of Physics Condensed Matter</i> , 2003, 15, 7625-7633.	1.8	50
25	Anomalous dynamics of water confined in MCM-41 at different hydrations. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 284102.	1.8	49
26	Liquid alkali metals and alloys as electron-ion plasmas. <i>Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics</i> , 1981, 111, 11-23.	0.9	48
27	Structural Properties of High and Low Density Water in a Supercooled Aqueous Solution of Salt. <i>Journal of Physical Chemistry B</i> , 2011, 115, 1461-1468.	2.6	43
28	Water confined in MCM-41: a mode coupling theory analysis. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 064109.	1.8	43
29	Molecular dynamics simulations of freezing-point depression of TIP4P/2005 water in solution with NaCl. <i>Journal of Molecular Liquids</i> , 2018, 261, 513-519.	4.9	43
30	Structural properties and liquid spinodal of water confined in a hydrophobic environment. <i>Physical Review E</i> , 2007, 76, 061202.	2.1	40
31	Advances in the study of supercooled water. <i>European Physical Journal E</i> , 2021, 44, 143.	1.6	40
32	Microscopic origin of the fragile to strong crossover in supercooled water: The role of activated processes. <i>Journal of Chemical Physics</i> , 2017, 146, 084502.	3.0	38
33	Structure and dynamics of nanoconfined water and aqueous solutions. <i>European Physical Journal E</i> , 2021, 44, 136.	1.6	38
34	Slow dynamics of a confined supercooled binary mixture: Direct space analysis. <i>Physical Review E</i> , 2003, 67, 041202.	2.1	36
35	Computer Simulation Study of the Structure of LiCl Aqueous Solutions: Test of Non-Standard Mixing Rules in the Ion Interaction. <i>Journal of Physical Chemistry B</i> , 2014, 118, 7680-7691.	2.6	36
36	The Widom line and dynamical crossover in supercritical water: Popular water models versus experiments. <i>Journal of Chemical Physics</i> , 2015, 143, 114502.	3.0	35

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37	Water in porous glasses. A computer simulation Study. Journal of Molecular Liquids, 1999, 80, 165-178.	4.9	33
38	Fluid-fluid phase separation in binary mixtures of asymmetric non-additive hard spheres. Journal of Physics Condensed Matter, 1994, 6, A163-A166.	1.8	31
39	Do ions affect the structure of water? The case of potassium halides. Journal of Molecular Liquids, 2014, 189, 52-56.	4.9	31
40	Fragile to strong crossover at the Widom line in supercooled aqueous solutions of NaCl. Journal of Chemical Physics, 2013, 139, 204503.	3.0	30
41	Hybrid molecular dynamics. Computer Physics Communications, 1990, 60, 311-318.	7.5	29
42	Mode Coupling relaxation scenario in a confined glass former. Europhysics Letters, 2002, 57, 212-218.	2.0	29
43	Thermodynamic behavior and structural properties of an aqueous sodium chloride solution upon supercooling. Journal of Chemical Physics, 2008, 128, 244508.	3.0	28
44	Freezing Temperatures, Ice Nanotubes Structures, and Proton Ordering of TIP4P/ICE Water inside Single Wall Carbon Nanotubes. Journal of Physical Chemistry B, 2017, 121, 10371-10381.	2.6	28
45	Structural properties and fragile to strong transition in confined water. Journal of Chemical Physics, 2017, 146, 084505.	3.0	24
46	Evidence of glassy behaviour of water molecules in confined states. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1999, 79, 1923-1930.	0.6	23
47	Freezing of Ionic Melts into Normal and Superionic Phases. Physics and Chemistry of Liquids, 1983, 13, 113-122.	1.2	20
48	Dynamic corrections for neutron scattering of water in the free molecule approximation. Journal of Chemical Physics, 1982, 77, 2647-2655.	3.0	19
49	Random sequential adsorption and diffusion of dimers and k-mers on a square lattice. Journal of Chemical Physics, 2001, 114, 7563-7569.	3.0	19
50	Computer simulation of the phase diagram for a fluid confined in a fractal and disordered porous material. Physical Review E, 2004, 70, 061505.	2.1	18
51	Relation between the two-body entropy and the relaxation time in supercooled water. Physical Review E, 2015, 91, 012107.	2.1	18
52	Fragile to strong crossover and Widom line in supercooled water: A comparative study. Frontiers of Physics, 2018, 13, 1.	5.0	18
53	The inelasticity correction for heavy water. Journal of Chemical Physics, 1980, 73, 3729-3734.	3.0	17
54	Slow dynamics of a confined supercooled binary mixture. II. Qspace analysis. Physical Review E, 2003, 68, 061209.	2.1	17

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55	Mode-coupling behavior of a Lennard-Jones binary mixture upon increasing confinement. <i>Physical Review E</i> , 2009, 80, 061502.	2.1	16
56	Effect of concentration on the thermodynamics of sodium chloride aqueous solutions in the supercooled regime. <i>Journal of Chemical Physics</i> , 2009, 130, 154511.	3.0	15
57	Magnetic-Phase Transitions of Ising Surfaces with Modified Surface-Bulk Coupling: a Monte Carlo Study. <i>Europhysics Letters</i> , 1992, 20, 547-552.	2.0	14
58	Double dynamical regime of confined water. <i>Journal of Physics Condensed Matter</i> , 2003, 15, 1521-1529.	1.8	14
59	Studies of water in confinement by experiments and simulations. <i>European Physical Journal Special Topics</i> , 2000, 10, Pr7-187-Pr7-193.	0.2	13
60	Freezing of a modulated liquid: The superionic-to-normal transition of strontium chloride. <i>Solid State Communications</i> , 1985, 55, 1109-1111.	1.9	12
61	Strong layering effects and anomalous dynamical behaviour in confined water at low hydration. <i>Journal of Physics Condensed Matter</i> , 2003, 15, S145-S150.	1.8	12
62	Spinodal of supercooled polarizable water. <i>Physical Review E</i> , 2007, 75, 011201.	2.1	12
63	Inelasticity effects in the neutron diffraction measurements from water steam using pulsed sources. <i>Journal of Molecular Liquids</i> , 1995, 64, 221-240.	4.9	11
64	Mode coupling behavior of a Lennard-Jones binary mixture: A comparison between bulk and confined phases. <i>Journal of Chemical Physics</i> , 2005, 123, 174510.	3.0	11
65	Computer simulation of critical phenomena in fluids. <i>Journal of Physics Condensed Matter</i> , 1993, 5, B193-B200.	1.8	10
66	Computer simulation of structural properties of dilute aqueous solutions of argon at supercritical conditions. <i>Journal of Chemical Physics</i> , 2003, 118, 3646-3650.	3.0	10
67	Inherent structures and Kauzmann temperature of confined liquids. <i>Physical Review E</i> , 2005, 71, 031204.	2.1	10
68	Molecular dynamics studies on the thermodynamics of supercooled sodium chloride aqueous solution at different concentrations. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 284104.	1.8	10
69	Liquid structure and freezing of the two-dimensional classical electron fluid. <i>Journal of Physics C: Solid State Physics</i> , 1985, 18, 4011-4019.	1.5	9
70	Liquid-liquid coexistence in the phase diagram of a fluid confined in fractal porous materials. <i>Europhysics Letters</i> , 2006, 75, 901-907.	2.0	8
71	The phase diagram of confined fluids. <i>Journal of Molecular Liquids</i> , 2007, 134, 90-93.	4.9	8
72	Excess entropy of water in a supercooled solution of salt. <i>Molecular Physics</i> , 2011, 109, 2969-2979.	1.7	8

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73	Characterization of hydration water in supercooled water-trehalose solutions: The role of the hydrogen bonds network. <i>Journal of Chemical Physics</i> , 2019, 151, 044507.	3.0	8
74	Phase equilibrium in liquid binary mixtures of non-additive hard spheres. <i>Physica Scripta</i> , 1992, T45, 251-252.	2.5	7
75	Microscopic two-dimensional lattice model of dimer granular compaction with friction. <i>Physical Review E</i> , 2002, 66, 031301.	2.1	7
76	Spontaneous NaCl-doped ices I _h , I _c , III, V and VI. Understanding the mechanism of ion inclusion and its dependence on the crystalline structure of ice. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 22897-22911.	2.8	7
77	Slow dynamics of supercooled hydration water in contact with lysozyme: examining the cage effect at different length scales. <i>Philosophical Magazine</i> , 2020, 100, 2582-2595.	1.6	6
78	Freezing of liquid alkali metals as screened ionic plasmas. <i>Journal of Physics Condensed Matter</i> , 1991, 3, 1627-1636.	1.8	5
79	Stretched exponential relaxation in a diffusive lattice model. <i>Physical Review E</i> , 2002, 65, 026127.	2.1	5
80	Local order in aqueous solutions of rare gases and the role of the solute concentration: a computer simulation study with a polarizable potential. <i>Molecular Physics</i> , 2005, 103, 501-506.	1.7	5
81	Thermodynamics of supercooled water in solutions. <i>Journal of Physics: Conference Series</i> , 2009, 177, 012003.	0.4	5
82	Slow Dynamics and Structure of Supercooled Water in Confinement. <i>Entropy</i> , 2017, 19, 185.	2.2	5
83	High density liquid structure enhancement in glass forming aqueous solution of LiCl. <i>Journal of Chemical Physics</i> , 2018, 148, 222829.	3.0	5
84	Ordering Transitions Induced by Coulomb Interactions. <i>Physics and Chemistry of Materials With Low-dimensional Structures</i> , 1989, , 221-238.	1.0	5
85	Liquid Structure and Freezing of Metals and Salts*. <i>Zeitschrift Fur Physikalische Chemie</i> , 1988, 156, 411-424.	2.8	4
86	Theory of gas-gas phase transition in rare-gas binary mixtures. <i>Journal of Chemical Physics</i> , 1996, 105, 2020-2027.	3.0	4
87	Structure and thermodynamics of supercooled aqueous solutions: Ionic solutes compared with water in a hydrophobic environment. <i>Journal of Molecular Liquids</i> , 2011, 159, 18-23.	4.9	4
88	Translational absorption band in low density mixtures of noble gases: the He-Xe case. <i>Molecular Physics</i> , 1995, 84, 1065-1075.	1.7	3
89	Supercooled confined water and the mode coupling scenario. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2002, 304, 53-58.	2.6	3
90	Slow dynamics of a confined supercooled binary mixture in comparison with the bulk phase. <i>Philosophical Magazine</i> , 2004, 84, 1397-1404.	1.6	3

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91	Class transition in confinement: a Lennard-Jones binary mixture study. Computer Physics Communications, 2005, 169, 214-217.	7.5	3
92	Supercooled water: A molecular dynamics simulation study with a polarizable potential. Journal of Molecular Liquids, 2006, 127, 28-32.	4.9	3
93	Liquid-solid transition in the bond-particle model for elemental semiconductors. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1992, 65, 921-932.	0.6	2
94	Molecular dynamics study of the glass transition in confined water. European Physical Journal Special Topics, 2000, 10, Pr7-203-Pr7-206.	0.2	2
95	Slow dynamics of k-mers on a square lattice. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2002, 82, 375-381.	0.6	2
96	Water at interfaces. Journal of Physics Condensed Matter, 2010, 22, 280301.	1.8	2
97	Lennard-Jones binary mixture in disordered matrices: exploring the mode coupling scenario at increasing confinement. Journal of Physics Condensed Matter, 2011, 23, 234118.	1.8	2
98	Thermodynamic Consistency and Entropy Change in the Density-Wave Theory of Freezing. Physics and Chemistry of Liquids, 1987, 16, 157-162.	1.2	1
99	Statistical mechanical models for liquid and amorphous structure in covalently bonded systems. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1990, 12, 619-632.	0.4	1
100	A mean-field study of the temperature dependence of the layer magnetizations in a semi-infinite Ising model. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1993, 15, 541-546.	0.4	1
101	Single particle dynamics of a confined Lennard-Jones mixture in the supercooled regime. Physica A: Statistical Mechanics and Its Applications, 2002, 314, 530-538.	2.6	1
102	Glass Transition in Confinement. AIP Conference Proceedings, 2006, , .	0.4	1
103	Structural Properties of Ionic Aqueous Solutions. , 2018, , 153-162.		0
104	Supercooled Liquids: Glass Transition and Mode Coupling Theory. Soft and Biological Matter, 2021, , 265-300.	0.3	0
105	Supercooled Water. Soft and Biological Matter, 2021, , 301-321.	0.3	0
106	Methods of Computer Simulation. Soft and Biological Matter, 2021, , 131-193.	0.3	0
107	Liquid Dichlorides and Dichloride-Monochloride Mixtures. ECS Proceedings Volumes, 1987, 1987-7, 195-199.	0.1	0