Nicolas Giovambattista

List of Publications by Year
in descending order

92 papers	5,462 citations	71102 41 h-index	79698 73 g-index
94 all docs	94 docs citations	94 times ranked	3765 citing authors

#	Article	IF	Citations
1	Evidence of a liquidâ€“liquid phase transition in H$$_2$$O and D$$_2$$O from path-integral molecular dynamics simulations. Scientific Reports, 2022, 12, 6004.	3.3	10
2	Nuclear quantum effects on the dynamics and glass behavior of a monatomic liquid with two liquid states. Journal of Chemical Physics, 2022, 156, .	3.0	3
3	Different temperature- and pressure-effects on the water-mediated interactions between hydrophobic, hydrophilic, and hydrophobicâ€“hydrophilic nanoscale surfaces. Journal of Chemical Physics, 2022, 157, .	3.0	3
4	The role of high-density and low-density amorphous ice on biomolecules at cryogenic temperatures: a case study with polyalanine. Physical Chemistry Chemical Physics, 2021, 23, 19402-19414.	2.8	3
5	How Small Is Too Small for the Capillarity Theory?. Journal of Physical Chemistry C, 2021, 125, 5335-5348.	3.1	4
6	Liquidâ€“liquid phase transition in simulations of ultrafast heating and decompression of amorphous ice. Journal of Non-Crystalline Solids: X, 2021, 11-12, 100067.	1.2	4
7	Nuclear quantum effects on the thermodynamic, structural, and dynamical properties of water. Physical Chemistry Chemical Physics, 2021, 23, 6914-6928.	2.8	14
8	Experimental observation of the liquid-liquid transition in bulk supercooled water under pressure. Science, 2020, 370, 978-982.	12.6	143
9	Energy Stored in Nanoscale Water Capillary Bridges between Patchy Surfaces. Langmuir, 2020, 36, 7246-7251.	3.5	5
10	Energy stored in nanoscale water capillary bridges formed between chemically heterogeneous surfaces with circular patches. Chinese Physics B, 2020, 29, 114703.	1.4	3
11	Nuclear quantum effects on the thermodynamic response functions of a polymorphic waterlike monatomic liquid. Physical Review Research, 2020, 2, .	3.6	6
12	Potential energy landscape formalism for quantum liquids. Physical Review Research, 2020, 2, .	3.6	4
13	Glass polymorphism in TIP4P/2005 water: A description based on the potential energy landscape formalism. Journal of Chemical Physics, 2019, 150, 244506.	3.0	20
14	Glass polymorphism and liquidâ€“liquid phase transition in aqueous solutions: experiments and computer simulations. Physical Chemistry Chemical Physics, 2019, 21, 23238-23268.	2.8	33
15	State variables for glasses: The case of amorphous ice. Journal of Chemical Physics, 2019, 150, 224502.	3.0	14
16	Comparative Study of Water-Mediated Interactions between Hydrophilic and Hydrophobic Nanoscale Surfaces. Journal of Physical Chemistry B, 2019, 123, 10814-10824.	2.6	12
17	Comparative Study of the Effects of Temperature and Pressure on the Water-Mediated Interactions between Apolar Nanoscale Solutes. Journal of Physical Chemistry B, 2019, 123, 1116-1128.	2.6	5
18	Phase Diagram of Water Confined by Graphene. Scientific Reports, 2018, 8, 6228.	3.3	55

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19	Anomalous Features in the Potential Energy Landscape of a Waterlike Monatomic Model with Liquid and Glass Polymorphism. Physical Review Letters, 2018, 120, 035701.	7.8	6
20	Validation of Capillarity Theory at the Nanometer Scale. II: Stability and Rupture of Water Capillary Bridges in Contact with Hydrophobic and Hydrophilic Surfaces. Journal of Physical Chemistry C, 2018, 122, 1556-1569.	3.1	8
21	Nuclear quantum effects on the liquidâ€“liquid phase transition of a water-like monatomic liquid. Physical Chemistry Chemical Physics, 2018, 20, 8210-8217.	2.8	9
22	Temperature Effects on Water-Mediated Interactions at the Nanoscale. Journal of Physical Chemistry B, 2018, 122, 8908-8920.	2.6	17
23	Searching for crystal-ice domains in amorphous ices. Physical Review Materials, 2018, 2, .	2.4	37
24	Irregular dynamics of the center of mass of droplets. Journal of Applied Nonlinear Dynamics, 2018, 7, 223-229.	0.3	0
25	Relationship between the potential energy landscape and the dynamic crossover in a water-like monatomic liquid with a liquid-liquid phase transition. Journal of Chemical Physics, 2017, 146, 014503.	3.0	15
26	Large-Scale Structure and Hyperuniformity of Amorphous Ices. Physical Review Letters, 2017, 119, 136002.	7.8	50
27	Heating- and pressure-induced transformations in amorphous and hexagonal ice: A computer simulation study using the TIP4P/2005 model. Journal of Chemical Physics, 2017, 147, 074505.	3.0	23
28	Structure and mobility of water confined in AlPO4-54 nanotubes. Journal of Chemical Physics, 2017, 146, 234509.	3.0	9
29	Influence of sample preparation on the transformation of low-density to high-density amorphous ice: An explanation based on the potential energy landscape. Journal of Chemical Physics, 2017, 147, 044501.	3.0	15
30	Potential energy landscape of the apparent first-order phase transition between low-density and high-density amorphous ice. Journal of Chemical Physics, 2016, 145, 224501.	3.0	27
31	Glass polymorphism in glycerolâ€“water mixtures: I. A computer simulation study. Physical Chemistry Chemical Physics, 2016, 18, 11042-11057.	2.8	26
32	Glass polymorphism in glycerolâ€“water mixtures: II. Experimental studies. Physical Chemistry Chemical Physics, 2016, 18, 11058-11068.	2.8	44
33	Validation of Capillarity Theory at the Nanometer Scale by Atomistic Computer Simulations of Water Droplets and Bridges in Contact with Hydrophobic and Hydrophilic Surfaces. Journal of Physical Chemistry C, 2016, 120, 1597-1608.	3.1	24
34	Confinement effects on the liquid-liquid phase transition and anomalous properties of a monatomic water-like liquid. Journal of Chemical Physics, 2015, 143, 244503.	3.0	9
35	Pressure-induced transformations in glassy water: A computer simulation study using the TIP4P/2005 model. Journal of Chemical Physics, 2015, 143, 074501.	3.0	40
36	Effects of Temperature on the Thermodynamic and Dynamical Properties of Glycerolâ€“Water Mixtures: A Computer Simulation Study of Three Different Force Fields. Journal of Physical Chemistry B, 2015, 119, 6250-6261.	2.6	25

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37	Heating-induced glass-glass and glass-liquid transformations in computer simulations of water. Journal of Chemical Physics, 2014, 140, 114504.	3.0	21
38	Effects of Temperature on the Properties of Glycerol: A Computer Simulation Study of Five Different Force Fields. Journal of Physical Chemistry B, 2014, 118, 11284-11294.	2.6	46
39	Glass Transitions in a Monatomic Liquid with Two Glassy States. Physical Review Letters, 2014, 112, 145701.	7.8	15
40	Effects of surface structure and solvophilicity on the crystallization of confined liquids. Soft Matter, 2013, 9, 11374.	2.7	12
41	Glass and liquid phase diagram of a polyamorphic monatomic system. Journal of Chemical Physics, 2013, 138, 064509.	3.0	21
42	Pressure-induced transformations in computer simulations of glassy water. Journal of Chemical Physics, 2013, 139, 184504.	3.0	35
43	A computational investigation of the phase behavior and capillary sublimation of water confined between nanoscale hydrophobic plates. Journal of Chemical Physics, 2012, 137, 144501.	3.0	40
44	Interplay of the Glass Transition and the Liquid-Liquid Phase Transition in Water. Scientific Reports, 2012, 2, 390.	3.3	80
45	Computational Studies of Pressure, Temperature, and Surface Effects on the Structure and Thermodynamics of Confined Water. Annual Review of Physical Chemistry, 2012, 63, 179-200.	10.8	120
46	Hydrogen bond strength and network structure effects on hydration of non-polar molecules. Physical Chemistry Chemical Physics, 2011, 13, 2748-2757.	2.8	28
47	Evaporation Length Scales of Confined Water and Some Common Organic Liquids. Journal of Physical Chemistry Letters, 2011, 2, 1000-1003.	4.6	48
48	Waterlike glass polyamorphism in a monoatomic isotropic Jagla model. Journal of Chemical Physics, 2011, 134, 064507.	3.0	46
49	Structure and Energetics of Thin Film Water. Journal of Physical Chemistry C, 2011, 115, 4624-4635.	3.1	33
50	Liquid and Glass Polymorphism in a Monatomic System with Isotropic, Smooth Pair Interactions. Journal of Physical Chemistry B, 2011, 115, 14229-14239.	2.6	41
51	Liquid-Liquid Phase Transition and Glass Transition in a Monoatomic Model System. International Journal of Molecular Sciences, 2010, 11, 5184-5200.	4.1	17
52	Enhanced surface hydrophobicity by coupling of surface polarity and topography. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15181-15185.	7.1	106
53	Phase Transitions Induced by Nanoconfinement in Liquid Water. Physical Review Letters, 2009, 102, 050603.	7.8	208
54	Effect of Surface Polarity on the Structure and Dynamics of Water in Nanoscale Confinement. Journal of Physical Chemistry B, 2009, 113, 1438-1446.	2.6	143

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55	Unusual phase behavior of one-component systems with two-scale isotropic interactions. Journal of Physics Condensed Matter, 2009, 21, 504106.	1.8	91
56	A monatomic system with a liquid-liquid critical point and two distinct glassy states. Journal of Chemical Physics, 2009, 130, 054505.	3.0	77
57	Evolution from Surface-Influenced to Bulk-Like Dynamics in Nanoscopically Confined Water. Journal of Physical Chemistry B, 2009, 113, 7973-7976.	2.6	97
58	Structural and mechanical properties of glassy water in nanoscale confinement. Faraday Discussions, 2009, 141, 359-376.	3.2	49
59	Effect of Temperature on the Structure and Phase Behavior of Water Confined by Hydrophobic, Hydrophilic, and Heterogeneous Surfaces. Journal of Physical Chemistry B, 2009, 113, 13723-13734.	2.6	155
60	Correspondence between phase diagrams of the TIP5P water model and a spherically symmetric repulsive ramp potential with two characteristic length scales. Physical Review E, 2008, 77, 042201.	2.1	52
61	Hydrophobicity of protein surfaces: Separating geometry from chemistry. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 2274-2279.	7.1	242
62	Connection of translational and rotational dynamical heterogeneities with the breakdown of the Stokes-Einstein and Stokes-Einstein-Debye relations in water. Physical Review E, 2007, 76, 031203.	2.1	166
63	Structure of the first- and second-neighbor shells of simulated water: Quantitative relation to translational and orientational order. Physical Review E, 2007, 76, 051201.	2.1	109
64	Hydration Behavior under Confinement by Nanoscale Surfaces with Patterned Hydrophobicity and Hydrophilicity. Journal of Physical Chemistry C, 2007, 111, 1323-1332.	3.1	224
65	Effect of Surface Polarity on Water Contact Angle and Interfacial Hydration Structure. Journal of Physical Chemistry B, 2007, 111, 9581-9587.	2.6	416
66	Amorphous ices: experiments and numerical simulations. Journal of Physics Condensed Matter, 2006, 18, R919-R977.	1.8	163
67	Family of tunable spherically symmetric potentials that span the range from hard spheres to waterlike behavior. Physical Review E, 2006, 73, 051204.	2.1	106
68	Effect of pressure on the phase behavior and structure of water confined between nanoscale hydrophobic and hydrophilic plates. Physical Review E, 2006, 73, 041604.	2.1	319
69	Relation between Rotational and Translational Dynamic Heterogeneities in Water. Physical Review Letters, 2006, 96, 057803.	7.8	120
70	Clusters of mobile molecules in supercooled water. Physical Review E, 2005, 72, 011202.	2.1	42
71	Structural order in glassy water. Physical Review E, 2005, 71, 061505.	2.1	48
72	Relation between the High Density Phase and the Very-High Density Phase of Amorphous Solid Water. Physical Review Letters, 2005, 94, 107803.	7.8	67

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73	Structural relaxation in the glass transition region of water. Physical Review E, 2005, 72, 011203.	2.1	25
74	Thermodynamics, structure, and dynamics of water confined between hydrophobic plates. Physical Review E, 2005, 72, 051503.	2.1	206
75	Phase diagram of amorphous solid water: Low-density, high-density, and very-high-density amorphous ices. Physical Review E, 2005, 72, 031510.	2.1	53
76	Static and dynamic heterogeneities in water. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2005, 363, 509-523.	3.4	49
77	Structural Order for One-Scale and Two-Scale Potentials. Physical Review Letters, 2005, 95, 130604.	7.8	142
78	Cooling rate, heating rate, and aging effects in glassy water. Physical Review E, 2004, 69, 050201.	2.1	23
79	Dynamic Heterogeneities in Liquid Water. AIP Conference Proceedings, 2004, , .	0.4	2
80	Static heterogeneities in liquid water. Physica A: Statistical Mechanics and Its Applications, 2004, 342, 40-47.	2.6	8
81	Dynamic Heterogeneities in Supercooled Water. Journal of Physical Chemistry B, 2004, 108, 6655-6662.	2.6	59
82	Glass-Transition Temperature of Water: A Simulation Study. Physical Review Letters, 2004, 93, 047801.	7.8	123
83	Heterogeneities in the Dynamics of Supercooled Water. , 2004, , 145-161.		0
84	Application of Statistical Physics to Understand Static and Dynamic Anomalies in Liquid Water. Journal of Statistical Physics, 2003, 110, 1039-1054.	1.2	23
85	Connection between Adam-Gibbs Theory and Spatially Heterogeneous Dynamics. Physical Review Letters, 2003, 90, 085506.	7.8	120
86	Potential-Energy Landscape Study of the Amorphous-Amorphous Transformation inH2O. Physical Review Letters, 2003, 91, 115504.	7.8	47
87	Transitions between inherent structures in water. Physical Review E, 2002, 65, 041502.	2.1	57
88	Models for a liquidâ€“liquid phase transition. Physica A: Statistical Mechanics and Its Applications, 2002, 304, 23-42.	2.6	102
89	Statistical physics and liquid water: â€œWhat mattersâ€• Physica A: Statistical Mechanics and Its Applications, 2002, 306, 230-242.	2.6	23
90	Title is missing!. Journal of Statistical Physics, 2000, 100, 97-106.	1.2	57

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91	Braunstein, Buceta, and Giovambattista Reply:. Physical Review Letters, 1999, 82, 1338-1338.	7.8	3
92	Directed percolation depinning models: Evolution equations. Physical Review E, 1999, 59, 4243-4247.	2.1	1