Francesco Mallamace

List of Publications by Year
in descending order

102 papers	4,566 citations	101384 36 h-index	102304 66 g-index
104 all docs	104 docs citations	104 times ranked	3593 citing authors

#	Article	IF	Citations
1	The violation of the Stokes-Einstein relation in supercooled water. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 12974-12978.	3.3	287
2	Evidence of the existence of the low-density liquid phase in supercooled, confined water. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 424-428.	3.3	273
3	Confined Water as Model of Supercooled Water. Chemical Reviews, 2016, 116, 7608-7625.	23.0	250
4	Appearance of a fractional Stokesâ€“Einstein relation in water and a structural interpretation ofÂits onset. Nature Physics, 2009, 5, 565-569.	6.5	219
5	The anomalous behavior of the density of water in the range 30 K < <i>T</i> < 373 K. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18387-18391.	3.3	208
6	Transport properties of glass-forming liquids suggest that dynamic crossover temperature is as important as the glass transition temperature. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 22457-22462.	3.3	197
7	The fragile-to-strong dynamic crossover transition in confined water: nuclear magnetic resonance results. Journal of Chemical Physics, 2006, 124, 161102.	1.2	186
8	Mesoscopic Structure ofmeso-Tetrakis(4-sulfonatophenyl)porphine J-Aggregates. Journal of Physical Chemistry B, 2000, 104, 5897-5904.	1.2	164
9	The Glass-to-Glass Transition and Its End Point in a Copolymer Micellar System. Science, 2003, 300, 619-622.	6.0	130
10	NMR evidence of a sharp change in a measure of local order in deeply supercooled confined water. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 12725-12729.	3.3	130
11	Interaction and percolation in theL64 triblock copolymer micellar system. Physical Review E, 1999, 60, 7076-7087.	0.8	107
12	Energy landscape in protein folding and unfolding. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3159-3163.	3.3	98
13	Role of the solvent in the dynamical transitions of proteins: The case of the lysozyme-water system. Journal of Chemical Physics, 2007, 127, 045104.	1.2	96
14	A singular thermodynamically consistent temperature at the origin of the anomalous behavior of liquid water. Scientific Reports, 2012, 2, 993.	1.6	90
15	Dynamical Crossover and Breakdown of the Stokesâ˘'Einstein Relation in Confined Water and in Methanol-Diluted Bulk Water. Journal of Physical Chemistry B, 2010, 114, 1870-1878.	1.2	84
16	The Low-Temperature Dynamic Crossover Phenomenon in Protein Hydration Water:Â Simulations vs Experiments. Journal of Physical Chemistry B, 2008, 112, 1571-1575.	1.2	81
17	The liquid water polymorphism. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15097-15098.	3.3	81
18	Clustering Dynamics in Water/Methanol Mixtures: A Nuclear Magnetic Resonance Study at 205 K < <i>T</i> < 295 K. Journal of Physical Chemistry B, 2008, 112, 10449-10454.	1.2	76

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19	Fractal Structures in Homo- and Heteroaggregated Water Soluble Porphyrins. Journal of Physical Chemistry B, 2000, 104, 9416-9420.	1.2	70
20	Small-angle neutron scattering study of the temperature-dependent attractive interaction in denseL64copolymer micellar solutions and its relation to kinetic glass transition. Physical Review E, 2002, 66, 021403.	0.8	67
21	The role of water in protein's behavior: The two dynamical crossovers studied by NMR and FTIR techniques. Computational and Structural Biotechnology Journal, 2015, 13, 33-37.	1.9	65
22	Possible relation of water structural relaxation to water anomalies. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4899-4904.	3.3	64
23	Separation of Scattering and Absorption Contributions in UV/Visible Spectra of Resonant Systems. Analytical Chemistry, 2001, 73, 4958-4963.	3.2	60
24	Aggregation in Water of Nonionic Amphiphilic Cyclodextrins with Short Hydrophobic Substituents. Langmuir, 2002, 18, 1945-1948.	1.6	53
25	The Role of Hydrogen Bonding in the Folding/Unfolding Process of Hydrated Lysozyme: A Review of Recent NMR and FTIR Results. International Journal of Molecular Sciences, 2018, 19, 3825.	1.8	49
26	The dynamical crossover phenomenon in bulk water, confined water and protein hydration water. Journal of Physics Condensed Matter, 2012, 24, 064103.	0.7	48
27	Aggregation in Fluid Solution of Dendritic Supermolecules made of Ruthenium(II)- and Osmium(II)-Polypyridine Building Blocks. Journal of the American Chemical Society, 1995, 117, 1754-1758.	6.6	47
28	Neutron- and light-scattering studies of the liquid-to-glass and glass-to-glass transitions in dense copolymer micellar solutions. Physical Review E, 2003, 68, 041402.	0.8	46
29	A Possible Role of Water in the Protein Folding Process. Journal of Physical Chemistry B, 2011, 115, 14280-14294.	1.2	44
30	The influence of water on protein properties. Journal of Chemical Physics, 2014, 141, 165104.	1.2	42
31	Dynamical properties of confined supercooled water: an NMR study. Journal of Physics Condensed Matter, 2006, 18, S2285-S2297.	0.7	40
32	The thermodynamical response functions and the origin of the anomalous behavior of liquid water. Faraday Discussions, 2013, 167, 95.	1.6	40
33	Molecular degradation of ancient documents revealed by 1H HR-MAS NMR spectroscopy. Scientific Reports, 2013, 3, 2896.	1.6	40
34	Percolation and viscoelasticity of triblock copolymer micellar solutions. Physica A: Statistical Mechanics and Its Applications, 1999, 266, 123-135.	1.2	38
35	Crossover in the Kinetic Growth Process of Porphyrin Aggregation. Physical Review Letters, 1999, 82, 3480-3483.	2.9	38
36	Dynamical properties of water-methanol solutions studied by depolarized Rayleigh scattering. Physical Review E, 1996, 54, 1720-1724.	0.8	37

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37	Transport properties of supercooled confined water. European Physical Journal: Special Topics, 2008, 161, 19-33.	1.2	37
38	Thermodynamic properties of bulk and confined water. Journal of Chemical Physics, 2014, 141, 18C504.	1.2	35
39	Growth of fractal aggregates in water solutions of macromolecules by light scattering. Physical Review A, 1989, 39, 4195-4200.	1.0	34
40	Nucleation effects in the aggregation of water-soluble porphyrin aqueous solutions. Physica A: Statistical Mechanics and Its Applications, 2002, 304, 158-169.	1.2	33
41	The role of the dynamic crossover temperature and the arrest in glass-forming fluids. European Physical Journal E, 2011, 34, 94.	0.7	33
42	Observation of high-temperature dynamic crossover in protein hydration water and its relation to reversible denaturation of lysozyme. Journal of Chemical Physics, 2009, 130, 135101.	1.2	32
43	The dynamic crossover in water does not require bulk water. Physical Chemistry Chemical Physics, 2012, 14, 8067.	1.3	32
44	Dynamical properties of water-methanol solutions. Journal of Chemical Physics, 2016, 144, 064506.	1.2	31
45	Spectral evidence of connected structures in liquid water: Effective Raman density of vibrational states. Physical Review E, 1993, 47, 2669-2675.	0.8	29
46	Elastic and quasielastic light-scattering studies of the aggregation phenomena in water solutions of polystyrene particles. Physical Review A, 1989, 40, 4665-4674.	1.0	27
47	Structural properties of methanol-polyamidoamine dendrimer solutions. Physical Review E, 1998, 58, 6229-6235.	0.8	25
48	Fractal aggregation of dyes such as porphyrins and related compounds under stacking. Current Opinion in Colloid and Interface Science, 2000, 5, 49-55.	3.4	25
49	On the ergodicity of supercooled molecular glass-forming liquids at the dynamical arrest: the o-terphenyl case. Scientific Reports, 2014, 4, 3747.	1.6	25
50	Light scattering and structure in a deoxyribonucleic acid solution. Physical Review A, 1983, 28, 3581-3588.	1.0	23
51	Spinodal decomposition of a three-component water-in-oil microemulsion system. Physical Review E, 1995, 51, 5818-5823.	0.8	23
52	Aggregation States of AÎ²1â€“40, AÎ²1â€“42 and AÎ²p3â€“42 Amyloid Beta Peptides: A SANS Study. International Journal of Molecular Sciences, 2019, 20, 4126.	1.8	23
53	Large structural order in dense microemulsions studied by light scattering. Physical Review A, 1989, 40, 2643-2648.	1.0	22
54	Molecular aggregations in waterâ€“2-butoxyethanol mixtures by ultrasonic and Brillouin light-scattering measurements. Physical Review A, 1991, 44, 2578-2587.	1.0	22

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55	Some thermodynamical aspects of protein hydration water. Journal of Chemical Physics, 2015, 142, 215103.	1.2	22
56	The structure and terahertz dynamics of water confined in nanoscale pools in salt solutions. Faraday Discussions, 2011, 150, 493.	1.6	20
57	Dynamical effects of supramolecular aggregates in water-butoxyethanol mixtures studied by viscosity measurements. Physical Review A, 1991, 44, 6652-6658.	1.0	19
58	Light absorption study of aggregating porphyrin in aqueous solutions. Physical Review E, 1998, 57, 5766-5770.	0.8	18
59	Viscosity measurements in dense microemulsions. Physical Review A, 1990, 42, 7330-7339.	1.0	16
60	Does water need a Î»-type transition?. Journal of Chemical Physics, 2009, 130, 126102.	1.2	15
61	Specific Heat and Transport Functions of Water. International Journal of Molecular Sciences, 2020, 21, 622.	1.8	14
62	Viscoelastic properties of dense microemulsions: Hypersound results. Physical Review A, 1991, 43, 5710-5713.	1.0	13
63	Some considerations on the water polymorphism and the liquid-liquid transition by the density behavior in the liquid phase. Journal of Chemical Physics, 2019, 151, 044504.	1.2	13
64	A mode coupling theory analysis of viscoelasticity near the kinetic glass transition of a copolymer micellar system. Journal of Physics Condensed Matter, 2004, 16, S4975-S4986.	0.7	12
65	The dynamical crossover in attractive colloidal systems. Journal of Chemical Physics, 2013, 139, 214502.	1.2	12
66	The role of water in the degradation process of paper using 1H HR-MAS NMR spectroscopy. Physical Chemistry Chemical Physics, 2016, 18, 33335-33343.	1.3	12
67	The onset of the tetrabonded structure in liquid water. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	12
68	Raman scattering and water structure in nonionic amphiphile solutions. Physical Review E, 1993, 48, 3661-3666.	0.8	11
69	Rotational dynamics of water molecules in a waterâ€“short-chain-nonionic-amphiphile mixture: Depolarized light scattering. Physical Review E, 1995, 51, 2349-2355.	0.8	11
70	Experimental tests for a liquid-liquid critical point in water. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	2.0	11
71	The protein irreversible denaturation studied by means of the bending vibrational mode. Physica A: Statistical Mechanics and Its Applications, 2014, 412, 39-44.	1.2	10
72	The Boson peak in confined water: An experimental investigation of the liquid-liquid phase transition hypothesis. Frontiers of Physics, 2015, 10, 1.	2.4	10

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73	Tailoring Chitosan/LTA Zeolite Hybrid Aerogels for Anionic and Cationic Dye Adsorption. International Journal of Molecular Sciences, 2021, 22, 5535.	1.8	10
74	Contrasting microscopic interactions determine the properties of water/methanol solutions. Frontiers of Physics, 2018, 13, 1.	2.4	10
75	Dynamical changes in hydration water accompanying lysozyme thermal denaturation. Frontiers of Physics, 2015, 10, 1.	2.4	9
76	NMR spectroscopy study of local correlations in water. Journal of Chemical Physics, 2016, 145, 214503.	1.2	9
77	Dynamics of water confined in non-ionic amphiphiles supramolecular structures. Physica A: Statistical Mechanics and Its Applications, 1996, 231, 207-219.	1.2	8
78	Dynamics of water clusters in solution with LiCl. Physica A: Statistical Mechanics and Its Applications, 2016, 442, 261-267.	1.2	8
79	Hydrophilic and hydrophobic competition in water-methanol solutions. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	8
80	NMR investigation of degradation processes of ancient and modern paper at different hydration levels. Frontiers of Physics, 2018, 13, 1.	2.4	8
81	Light-scattering studies in cross-linked gels: Evidence of a microphase separation. Physical Review E, 1993, 48, 4501-4509.	0.8	7
82	Light-scattering studies on waterâ€“nonionic-amphiphile solutions. Physical Review E, 1995, 51, 2341-2348.	0.8	7
83	Some considerations on the transport properties of water-glycerol suspensions. Journal of Chemical Physics, 2016, 144, 014501.	1.2	7
84	The Boson peak interpretation and evolution in confined amorphous water. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	7
85	Hydrophilic and Hydrophobic Effects on the Structure and Themodynamic Properties of Confined Water: Water in Solutions. International Journal of Molecular Sciences, 2021, 22, 7547.	1.8	7
86	A study of the hydrogen bonds effect on the water density and the liquid-liquid transition. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	5
87	A Molecular Interpretation of the Dynamics of Diffusive Mass Transport of Water within a Glassy Polyetherimide. International Journal of Molecular Sciences, 2021, 22, 2908.	1.8	5
88	Studies of structural arrest transition in L64/D2O micellar solutions. Journal of Physics Condensed Matter, 2004, 16, S4951-S4974.	0.7	4
89	Water and lysozyme: Some results from the bending and stretching vibrational modes. Frontiers of Physics, 2015, 10, 1.	2.4	4
90	Some Aspects of the Liquid Water Thermodynamic Behavior: From The Stable to the Deep Supercooled Regime. International Journal of Molecular Sciences, 2020, 21, 7269.	1.8	4

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91	The Water Polymorphism and the Liquidâ€“Liquid Transition from Transport Data. Physchem, 2021, 1, 202-214.	0.5	4
92	Thermodynamical properties of glass forming systems: A Nuclear Magnetic Resonance analysis. Journal of Non-Crystalline Solids, 2011, 357, 286-292.	1.5	3
93	The dynamical fragile-to-strong crossover in attractive colloidal systems. Journal of Non-Crystalline Solids, 2015, 407, 355-360.	1.5	3
94	The fragile to strong dynamical crossover in supercooled liquids. The o-terphenyl case and its ergodicity at the dynamical arrest. , 2013, , .		2
95	Some Considerations on Confined Water: The Thermal Behavior of Transport Properties in Water-Glycerol and Water-Methanol Mixtures. MRS Advances, 2016, 1, 1891-1902.	0.5	2
96	The evaluation of the hydrophilicâ€“hydrophobic interactions and their effect in waterâ€“methanol solutions: A study in terms of the thermodynamic state functions in the frame of the transition state theory. Colloids and Surfaces B: Biointerfaces, 2018, 168, 193-200.	2.5	1
97	The Proton Density of States in Confined Water (H2O). International Journal of Molecular Sciences, 2019, 20, 5373.	1.8	1
98	Water Thermodynamics and Its Effects on the Protein Stability and Activity. Biophysica, 2021, 1, 413-428.	0.6	1
99	The Interplay between the Theories of Mode Coupling and of Percolation Transition in Attractive Colloidal Systems. International Journal of Molecular Sciences, 2022, 23, 5316.	1.8	1
100	Observation of Liquid-to-Glass and Glass-to-Glass Transitions in L64/D2O Triblock Copolymer Micellar System. Molecular Simulation, 2003, 29, 611-618.	0.9	0
101	On some experimental reasons for an inhomogeneous structure of ambient water on the nanometer length scale. , 2014, , 107-125.		0
102	Preface to the special topic: New advances in water and water systems. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	0