Carmelo Corsaro

List of Publications by Year
in descending order

103	3,709	126907	138484
papers	citations	33 h-index	58 g-index

113	113	113	3593
all docs	docs citations	times ranked	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.	7.1	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.	7.1	273
3	The anomalous behavior of the density of water in the range 30 K < T < 373 K. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18387-18391.	7.1	208
4	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.	7.1	197
5	The fragile-to-strong dynamic crossover transition in confined water: nuclear magnetic resonance results. Journal of Chemical Physics, 2006, 124, 161102.	3.0	186
6	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.	7.1	130
7	Metabolomic investigation of Mytilus galloprovincialis (Lamarck 1819) caged in aquatic environments. Ecotoxicology and Environmental Safety, 2012, 84, 139-146.	6.0	124
8	Impact of environmental pollution on caged mussels Mytilus galloprovincialis using NMR-based metabolomics. Marine Pollution Bulletin, 2013, 77, 132-139.	5.0	122
9	Energy landscape in protein folding and unfolding. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3159-3163.	7.1	98
10	Role of the solvent in the dynamical transitions of proteins: The case of the lysozyme-water system. Journal of Chemical Physics, 2007, 127, 045104.	3.0	96
11	A singular thermodynamically consistent temperature at the origin of the anomalous behavior of liquid water. Scientific Reports, 2012, 2, 993.	3.3	90
12	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.	2.6	84
13	Metal-Oxide Based Nanomaterials: Synthesis, Characterization and Their Applications in Electrical and Electrochemical Sensors. Sensors, 2021, 21, 2494.	3.8	79
14	Clustering Dynamics in Water/Methanol Mixtures: A Nuclear Magnetic Resonance Study at 205 K < T < 295 K. Journal of Physical Chemistry B, 2008, 112, 10449-10454.	2.6	76
15	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.	4.1	65
16	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.	7.1	64
17	Enhanced detection of aldehydes in Extra-Virgin Olive Oil by means of band selective NMR spectroscopy. Physica A: Statistical Mechanics and Its Applications, 2015, 420, 258-264.	2.6	58
18	Digestive cells from Mytilus galloprovincialis show a partial regulatory volume decrease following acute hypotonic stress through mechanisms involving inorganic ions. Cell Biochemistry and Function, 2013, 31, 489-495.	2.9	54

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19	The metabolic profile of lemon juice by proton HR-MAS NMR: the case of the PGI Interdonato Lemon of Messina. Natural Product Research, 2015, 29, 1894-1902.	1.8	54
20	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.	4.1	49
21	The dynamical crossover phenomenon in bulk water, confined water and protein hydration water. Journal of Physics Condensed Matter, 2012, 24, 064103.	1.8	48
22	¹H HR-MAS NMR Spectroscopy and the Metabolite Determination of Typical Foods in Mediterranean Diet. Journal of Analytical Methods in Chemistry, 2015, 2015, 1-14.	1.6	45
23	A Possible Role of Water in the Protein Folding Process. Journal of Physical Chemistry B, 2011, 115, 14280-14294.	2.6	44
24	The influence of water on protein properties. Journal of Chemical Physics, 2014, 141, 165104.	3.0	42
25	A multivariate statistical analysis coming from the NMR metabolic profile of cherry tomatoes (The) Tj ETQq1 1 0.784314 rgBT /Overlo	2.6	41
26	HR-MAS and NMR towards Foodomics. Food Research International, 2016, 89, 1085-1094.	6.2	41
27	Dynamical properties of confined supercooled water: an NMR study. Journal of Physics Condensed Matter, 2006, 18, S2285-S2297.	1.8	40
28	The thermodynamical response functions and the origin of the anomalous behavior of liquid water. Faraday Discussions, 2013, 167, 95.	3.2	40
29	Molecular degradation of ancient documents revealed by 1H HR-MAS NMR spectroscopy. Scientific Reports, 2013, 3, 2896.	3.3	40
30	Transport properties of supercooled confined water. European Physical Journal: Special Topics, 2008, 161, 19-33.	2.6	37
31	Statistical Analysis of Mineral Concentration for the Geographic Identification of Garlic Samples from Sicily (Italy), Tunisia and Spain. Foods, 2016, 5, 20.	4.3	36
32	Thermodynamic properties of bulk and confined water. Journal of Chemical Physics, 2014, 141, 18C504.	3.0	35
33	The role of the dynamic crossover temperature and the arrest in glass-forming fluids. European Physical Journal E, 2011, 34, 94.	1.6	33
34	The dynamic crossover in water does not require bulk water. Physical Chemistry Chemical Physics, 2012, 14, 8067.	2.8	32
35	Dynamical properties of water-methanol solutions. Journal of Chemical Physics, 2016, 144, 064506.	3.0	31
36	Weibull Modeling of Controlled Drug Release from Ag-PMA Nanosystems. Polymers, 2021, 13, 2897.	4.5	30

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37	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si9.gif" display="inline" overflow="scroll"><mml:msup><mml:mrow /><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msup><mml:mstyle mathvariant="normal"><mml:mi>H</mml:mi></mml:mstyle></mml:math> NMR study of water/methanol solutions as a function of temperature and concentration. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 596-601.	2.6	26
38	Inelastic Neutron Scattering Study of Water in Hydrated LTA-Type Zeolites. Journal of Physical Chemistry A, 2006, 110, 1190-1195.	2.5	25
39	Water Diffusion in Nanoporous Glass:â€‰ An NMR Study at Different Hydration Levels. Journal of Physical Chemistry B, 2008, 112, 3927-3930.	2.6	25
40	On the ergodicity of supercooled molecular glass-forming liquids at the dynamical arrest: the o-terphenyl case. Scientific Reports, 2014, 4, 3747.	3.3	25
41	Aggregation States of AÎ²1â€“40, AÎ²1â€“42 and AÎ²p3â€“42 Amyloid Beta Peptides: A SANS Study. International Journal of Molecular Sciences, 2019, 20, 4126.	4.1	23
42	Some thermodynamical aspects of protein hydration water. Journal of Chemical Physics, 2015, 142, 215103.	3.0	22
43	Interaction of alcohol with phospholipid membrane: NMR and XRD investigations on DPPCâ€“hexanol system. Spectroscopy, 2010, 24, 375-380.	0.8	20
44	The structure and terahertz dynamics of water confined in nanoscale pools in salt solutions. Faraday Discussions, 2011, 150, 493.	3.2	20
45	The Stokes-Einstein relation in water/methanol solutions. Journal of Chemical Physics, 2019, 150, 234506.	3.0	20
46	Antimicrobial Effect and Cytotoxic Evaluation of Mg-Doped Hydroxyapatite Functionalized with Au-Nano Rods. Molecules, 2021, 26, 1099.	3.8	20
47	Acrylate and Methacrylate Polymersâ€™ Applications: Second Life with Inexpensive and Sustainable Recycling Approaches. Materials, 2022, 15, 282.	2.9	18
48	A Nuclear Magnetic Resonance study of the reversible denaturation of hydrated lysozyme. Physica A: Statistical Mechanics and Its Applications, 2011, 390, 2904-2908.	2.6	16
49	Plasmon-Enhanced Controlled Drug Release from Ag-PMA Capsules. Molecules, 2020, 25, 2267.	3.8	14
50	Specific Heat and Transport Functions of Water. International Journal of Molecular Sciences, 2020, 21, 622.	4.1	14
51	Hydrophilicity and hydrophobicity: Key aspects for biomedical and technological purposes. Physica A: Statistical Mechanics and Its Applications, 2021, 580, 126189.	2.6	14
52	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.	3.0	13
53	Structural and vibrational properties of carbon nanotubes by TEM and infrared spectroscopy. Diamond and Related Materials, 2004, 13, 1249-1253.	3.9	12
54	Mobility of water in Linde type A synthetic zeolites: an inelastic neutron scattering study. Journal of Physics Condensed Matter, 2005, 17, 7925-7934.	1.8	12

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55	Synthesis and characterization of a colloidal novel folic acidâ€“Î²-cyclodextrin conjugate for targeted drug delivery. Journal of Inclusion Phenomena and Macrocyclic Chemistry, 2011, 69, 321-325.	1.6	12
56	The dynamical crossover in attractive colloidal systems. Journal of Chemical Physics, 2013, 139, 214502.	3.0	12
57	Lipid Diffusion in Alcoholic Environment. Journal of Physical Chemistry B, 2014, 118, 9349-9355.	2.6	12
58	The role of water in the degradation process of paper using 1H HR-MAS NMR spectroscopy. Physical Chemistry Chemical Physics, 2016, 18, 33335-33343.	2.8	12
59	Calorimetric analysis points out the physical-chemistry of organic olive oils and reveals the geographical origin. Physica A: Statistical Mechanics and Its Applications, 2017, 486, 925-932.	2.6	12
60	The onset of the tetrabonded structure in liquid water. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	5.1	12
61	Diffusive dynamics of water in ion-exchanged zeolites. Molecular Physics, 2006, 104, 587-598.	1.7	11
62	Influence of Alcohols on the Lateral Diffusion in Phospholipid Membranes. Journal of Physical Chemistry B, 2016, 120, 1285-1290.	2.6	11
63	Experimental tests for a liquid-liquid critical point in water. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	5.1	11
64	NMR in Metabolomics: From Conventional Statistics to Machine Learning and Neural Network Approaches. Applied Sciences (Switzerland), 2022, 12, 2824.	2.5	11
65	Proton mobilities in crambin and glutathione S-transferase. Chemical Physics, 2003, 292, 445-450.	1.9	10
66	The protein irreversible denaturation studied by means of the bending vibrational mode. Physica A: Statistical Mechanics and Its Applications, 2014, 412, 39-44.	2.6	10
67	The Boson peak in confined water: An experimental investigation of the liquid-liquid phase transition hypothesis. Frontiers of Physics, 2015, 10, 1.	5.0	10
68	Contrasting microscopic interactions determine the properties of water/methanol solutions. Frontiers of Physics, 2018, 13, 1.	5.0	10
69	Elastic neutron scattering study of water dynamics in ion-exchanged type-Azeolites. Physical Review E, 2005, 72, 061504.	2.1	9
70	Physical study of dynamics in fully hydrated phospholipid bilayers. Philosophical Magazine, 2008, 88, 4033-4046.	1.6	9
71	Dynamical changes in hydration water accompanying lysozyme thermal denaturation. Frontiers of Physics, 2015, 10, 1.	5.0	9
72	NMR spectroscopy study of local correlations in water. Journal of Chemical Physics, 2016, 145, 214503.	3.0	9

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73	Dynamics of water clusters in solution with LiCl. Physica A: Statistical Mechanics and Its Applications, 2016, 442, 261-267.	2.6	8
74	Hydrophilic and hydrophobic competition in water-methanol solutions. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	5.1	8
75	NMR investigation of degradation processes of ancient and modern paper at different hydration levels. Frontiers of Physics, 2018, 13, 1.	5.0	8
76	Reply to Elmatad: Supercooled viscous liquids display a fragile-to-strong dynamic crossover. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, .	7.1	7
77	Some considerations on the transport properties of water-glycerol suspensions. Journal of Chemical Physics, 2016, 144, 014501.	3.0	7
78	ESR evidence of the dynamic crossover in the supercooled liquid states of a series of solid n-alkanes. Physical Chemistry Chemical Physics, 2018, 20, 11145-11151.	2.8	7
79	The Boson peak interpretation and evolution in confined amorphous water. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	5.1	7
80	Paper aging and degradation monitoring by the non-destructive two-dimensional micro-Raman mapping. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 228, 117660.	3.9	7
81	Vibrational spectroscopy of maleimide. Physica B: Condensed Matter, 2004, 350, E591-E593.	2.7	5
82	The fragile-to-strong dynamical crossover and the system viscoelasticity in attractive glass forming colloids. Colloid and Polymer Science, 2015, 293, 3337-3349.	2.1	5
83	Liquid water structure from X-ray absorption and emission, NMR shielding and X-ray diffraction. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	5.1	5
84	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.	5.1	5
85	Analysis of the thermal fluctuations in inclusion complexes of genistein with Î²-cyclodextrin derivatives. Chemical Physics, 2019, 516, 125-131.	1.9	5
86	Gaussian Parameters Correlate with the Spread of COVID-19 Pandemic: The Italian Case. Applied Sciences (Switzerland), 2021, 11, 6119.	2.5	5
87	Water and lysozyme: Some results from the bending and stretching vibrational modes. Frontiers of Physics, 2015, 10, 1.	5.0	4
88	SANS study of Amyloid<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll" id="d1e303" altimg="si64.gif"><mml:msub><mml:mrow><mml:mi>Î²</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub><mml:mo>â^'</mml:mo></mml:math>Unfolded monomers in DMSO, multidimensional aggregates in water medium. Physica A: Statistical Mechanics and Its Applications, 2019, 517, 385-391.	2.6	4
89	Silver fir characterized by micro-imaging NMR and FTIR spectroscopy. IOP Conference Series: Materials Science and Engineering, 2020, 777, 012004.	0.6	4
90	Thermodynamical properties of glass forming systems: A Nuclear Magnetic Resonance analysis. Journal of Non-Crystalline Solids, 2011, 357, 286-292.	3.1	3

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91	The dynamical fragile-to-strong crossover in attractive colloidal systems. Journal of Non-Crystalline Solids, 2015, 407, 355-360.	3.1	3
92	Proton NMR study of extra Virgin Olive Oil with temperature: Freezing and melting kinetics. Physica A: Statistical Mechanics and Its Applications, 2018, 499, 20-27.	2.6	3
93	Low-temperature dynamics of hydrated peptides. Chemical Physics, 2008, 345, 245-249.	1.9	2
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.	0.9	2
96	Direct Analysis in Foodomics: NMR approaches. , 2021, , 517-535.		2
97	From Critical Point to Critical Point: The Two-States Model Describes Liquid Water Self-Diffusion from 623 to 126 K. Molecules, 2021, 26, 5899.	3.8	2
98	Nano-Hybrid Au@LCCs Systems Displaying Anti-Inflammatory Activity. Materials, 2022, 15, 3701.	2.9	2
99	Dynamics of collagen from bovine connective tissues. Physica B: Condensed Matter, 2004, 350, E631-E633.	2.7	1
100	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.	5.0	1
101	The Proton Density of States in Confined Water (H2O). International Journal of Molecular Sciences, 2019, 20, 5373.	4.1	1
102	Clinical CT densitometry for wooden cultural heritage analysis validated by FTIR and Raman spectroscopies. Radiation Physics and Chemistry, 2022, 199, 110376.	2.8	1
103	On some experimental reasons for an inhomogeneous structure of ambient water on the nanometer length scale. , 2014, , 107-125.		0