Francesca Natali

List of Publications by Year in descending order

89 papers	1,478 citations	361413 20 h-index	377865 34 g-index
94 all docs	94 docs citations	94 times ranked	1725 citing authors

#	Article	IF	Citations
1	Crossover from Large to Small Polarons across the Metal-Insulator Transition in Manganites. Physical Review Letters, 1998, 81, 878-881.	7.8	190
2	Direct Evidence of the Amino Acid Side Chain and Backbone Contributions to Protein Anharmonicity. Journal of the American Chemical Society, 2010, 132, 1371-1376.	13.7	75
3	Physical Origin of Anharmonic Dynamics in Proteins: New Insights From Resolution-Dependent Neutron Scattering on Homomeric Polypeptides. Physical Review Letters, 2012, 109, 128102.	7.8	57
4	Structural and Functional Characterization of Human Peripheral Nervous System Myelin Protein P2. PLoS ONE, 2010, 5, e10300.	2.5	57
5	New sources and instrumentation for neutrons in biology. Chemical Physics, 2008, 345, 133-151.	1.9	53
6	The â€œProtein Dynamical Transitionâ€•Does Not Require the Protein Polypeptide Chain. Journal of Physical Chemistry Letters, 2011, 2, 2275-2279.	4.6	41
7	A benchmark for protein dynamics: Ribonuclease A measured by neutron scattering in a large wavevector-energy transfer range. Chemical Physics, 2008, 345, 305-314.	1.9	39
8	Thermal fluctuations of haemoglobin from different species: adaptation to temperature via conformational dynamics. Journal of the Royal Society Interface, 2012, 9, 2845-2855.	3.4	37
9	Bile Acid Recognition by NAPE-PLD. ACS Chemical Biology, 2016, 11, 2908-2914.	3.4	36
10	Structural and dynamical properties of reconstituted myelin sheaths in the presence of myelin proteins MBP and P2 studied by neutron scattering. Soft Matter, 2014, 10, 519-529.	2.7	34
11	Molecular origin and hydration dependence of protein anharmonicity: an elastic neutron scattering study. Physical Chemistry Chemical Physics, 2010, 12, 10215.	2.8	31
12	Strikingly Different Roles of SARS-CoV-2 Fusion Peptides Uncovered by Neutron Scattering. Journal of the American Chemical Society, 2022, 144, 2968-2979.	13.7	30
13	Undulator QEXAFS at the ESRF beamline ID26. Journal of Synchrotron Radiation, 1999, 6, 174-175.	2.4	29
14	X-ray and neutron reflectivity study of solid-supported lipid membranes prepared by spin coating. Journal of Applied Physics, 2004, 96, 6839-6844.	2.5	29
15	Absence of molecular mobility on nano-second time scales in amorphous ice phases. Physical Chemistry Chemical Physics, 2005, 7, 1423.	2.8	29
16	Evidence of a low-temperature dynamical transition in concentrated microgels. Science Advances, 2018, 4, eaat5895.	10.3	28
17	Water, Solute, and Segmental Dynamics in Polysaccharide Hydrogels. Macromolecular Bioscience, 2006, 6, 579-589.	4.1	26
18	Dynamics of myoglobin in confinement: An elastic and quasi-elastic neutron scattering study. Chemical Physics, 2008, 345, 259-266.	1.9	26

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19	Dynamic Properties of an Oriented Lipid/DNA Complex Studied by Neutron Scattering. Biophysical Journal, 2005, 88, 1081-1090.	0.5	25
20	Surviving salt fluctuations: stress and recovery in Halobacterium salinarum, an extreme halophilic Archaeon. Scientific Reports, 2020, 10, 3298.	3.3	23
21	Water Dynamics in Neural Tissue. Journal of the Physical Society of Japan, 2013, 82, SA017.	1.6	22
22	Proteinâ€“membrane interaction: effect of myelin basic protein on the dynamics of oriented lipids. Chemical Physics, 2003, 292, 455-464.	1.9	21
23	Incoherent elastic and quasi-elastic neutron scattering investigation of hemoglobin dynamics. Biophysical Chemistry, 2005, 116, 219-225.	2.8	21
24	Dynamic properties of a reconstituted myelin sheath. Spectroscopy, 2010, 24, 585-592.	0.8	21
25	Polymer and Water Dynamics in Poly(vinyl alcohol)/Poly(methacrylate) Networks. A Molecular Dynamics Simulation and Incoherent Neutron Scattering Investigation. Polymers, 2011, 3, 1805-1832.	4.5	21
26	Direct comparison of elastic incoherent neutron scattering experiments with molecular dynamics simulations of DMPC phase transitions. European Physical Journal E, 2016, 39, 48.	1.6	20
27	The Dynamical Transition of Lipid Multilamellar Bilayers as a Matter of Cooperativity. Journal of Physical Chemistry B, 2017, 121, 6860-6868.	2.6	20
28	Hydration dependent dynamics in solâ€“gel encapsulated myoglobin. European Biophysics Journal, 2008, 37, 543-549.	2.2	19
29	A new approach for the study of cationic lipidâ€“DNA complexes by energy dispersive X-ray diffraction. Chemical Physics Letters, 2002, 366, 200-204.	2.6	17
30	Thermal fluctuations in chemically cross-linked polymers of cyclodextrins. Soft Matter, 2015, 11, 2183-2192.	2.7	17
31	Dynamics of the Peripheral Membrane Protein P2 from Human Myelin Measured by Neutron Scatteringâ€”A Comparison between Wild-Type Protein and a Hinge Mutant. PLoS ONE, 2015, 10, e0128954.	2.5	17
32	Ergodicity breaking in strong and network-forming glassy systems. Physical Review B, 2009, 79, .	3.2	16
33	Polystyrene perturbs the structure, dynamics, and mechanical properties of DPPC membranes: An experimental and computational study. Journal of Colloid and Interface Science, 2022, 605, 110-119.	9.4	15
34	Aluminum site structure in serum transferrin and lactoferrin revealed by synchrotron radiation X-ray spectroscopy. BioMetals, 1997, 10, 363-367.	4.1	14
35	Flexibility and drug release features of lipid/saccharide nanoparticles. Soft Matter, 2010, 6, 685-691.	2.7	14
36	Anomalous proton dynamics of water molecules in neural tissue as seen by quasi-elastic neutron scattering. Impact on medical imaging techniques. AIP Conference Proceedings, 2013, , .	0.4	14

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37	Probing the dynamics of complexed local anesthetics via neutron scattering spectroscopy and DFT calculations. International Journal of Pharmaceutics, 2017, 524, 397-406.	5.2	14
38	Raman and Infrared spectroscopies and X-ray diffraction data on bupivacaine and ropivacaine complexed with 2-hydroxypropylâ^Ï²â^cyclodextrin. Data in Brief, 2017, 15, 25-29.	1.0	14
39	Anomalous water dynamics in brain: a combined diffusion magnetic resonance imaging and neutron scattering investigation. Journal of the Royal Society Interface, 2019, 16, 20190186.	3.4	14
40	A Structurally Simple Vaccine Candidate Reduces Progression and Dissemination of Triple-Negative Breast Cancer. IScience, 2020, 23, 101250.	4.1	14
41	The influence of the lipidâ€“protein interaction on the membrane dynamics. Physica B: Condensed Matter, 2004, 350, E623-E626.	2.7	13
42	Absence of fast precursor dynamics of low-density amorphous ice around its hypothetical glass transition temperature. Physical Chemistry Chemical Physics, 2004, 6, 677.	2.8	12
43	The fluctuating ribosome: thermal molecular dynamics characterized by neutron scattering. Scientific Reports, 2016, 6, 37138.	3.3	12
44	Spectroscopic investigation of ionizing-radiation tolerance of aChlorophyceaegreen micro-alga. Journal of Physics Condensed Matter, 2008, 20, 104216.	1.8	11
45	Myelin basic protein reduces molecular motions in DMPA, an elastic neutron scattering study. Physica B: Condensed Matter, 2001, 301, 145-149.	2.7	10
46	Mobility of a Mononucleotide within a Lipid Matrix: A Neutron Scattering Study. Life, 2017, 7, 2.	2.4	9
47	Electric Field Induced Polarization Effects Measured by in Situ Neutron Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 23582-23591.	3.1	8
48	Smart Device for Biologically Enhanced Functional Regeneration of Osteoâ€“Tendon Interface. Pharmaceutics, 2021, 13, 1996.	4.5	8
49	Changes in the anisotropy of oriented membrane dynamics induced by myelin basic protein. Applied Physics A: Materials Science and Processing, 2002, 74, s1582-s1584.	2.3	7
50	Dynamical properties of water in living cells. Frontiers of Physics, 2018, 13, 1.	5.0	7
51	Atomic scale investigation of the volume phase transition in concentrated PNIPAM microgels. Journal of Chemical Physics, 2020, 152, 204904.	3.0	7
52	The dynamical Matryoshka model: 2. Modeling of local lipid dynamics at the sub-nanosecond timescale in phospholipid membranes. Biochimica Et Biophysica Acta - Biomembranes, 2022, 1864, 183950.	2.6	7
53	The dynamical Matryoshka model: 3. Diffusive nature of the atomic motions contained in a new dynamical model for deciphering local lipid dynamics. Biochimica Et Biophysica Acta - Biomembranes, 2022, 1864, 183949.	2.6	7
54	From manganites to cuprates: a comparative study of the local lattice instability. Zeitschrift FÃ¼r Physik B-Condensed Matter, 1997, 104, 699-702.	1.1	6

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55	Elastic neutron scattering study of proton dynamics in glycerol. Physica B: Condensed Matter, 2004, 350, E951-E954.	2.7	6
56	Perspectives in biological physics: The nDDB project for a neutron Dynamics Data Bank for biological macromolecules. European Physical Journal E, 2013, 36, 80.	1.6	6
57	Molecular mobility in Medicago truncatula seed during early stage of germination: Neutron scattering and NMR investigations. Chemical Physics, 2014, 428, 181-185.	1.9	6
58	The Boson Peak of Amyloid Fibrils: Probing the Softness of Protein Aggregates by Inelastic Neutron Scattering. Journal of Physical Chemistry B, 2014, 118, 2913-2923.	2.6	6
59	Proteinlike dynamical transition of hydrated polymer chains. Physical Review Research, 2021, 3, .	3.6	6
60	Electrical conductivity and ion permeation in planar lipid membranes. Bioelectrochemistry, 1996, 41, 197-200.	1.0	5
61	Light induced states in MbCO denatured with Guanidine hydrochloride. European Biophysics Journal, 1998, 27, 1-7.	2.2	5
62	A TRANSITION FROM LARGE TO SMALL POLARONS IN THE La0.75Ca0.25MnO3 PEROVSKITE SYSTEM. Journal of Physics and Chemistry of Solids, 1998, 59, 2220-2223.	4.0	5
63	Multiple-scattering x-ray absorption investigation of the local structure around substitutional Ge impurities in Ag. Physical Review B, 1999, 60, 6-9.	3.2	5
64	Recent Neutron Investigations on Biomolecular Dynamics: From Model Systems towards Complex Macromolecular Machines. Journal of Neutron Research, 2002, 10, 115-122.	1.1	5
65	IN13 backscattering spectrometer: an instrument in evolution. Physica B: Condensed Matter, 2004, 350, E819-E822.	2.7	5
66	Influence of myelin proteins on the structure and dynamics of a model membrane with emphasis on the low temperature regime. Journal of Chemical Physics, 2014, 141, 205101.	3.0	5
67	Brain lateralization probed by water diffusion at the atomic to micrometric scale. Scientific Reports, 2019, 9, 14694.	3.3	5
68	Dynamics of Cardiomyopathy-Causing Mutant of Troponin Measured by Neutron Scattering. Journal of the Physical Society of Japan, 2013, 82, SA020.	1.6	4
69	Neutron scattering studies on protein dynamics using the human myelin peripheral membrane protein P2. EPJ Web of Conferences, 2015, 83, 02010.	0.3	4
70	A Quasielastic Neutron Scattering Investigation on the Molecular Self-Dynamics of Human Myelin Protein P2. Journal of Physical Chemistry B, 2019, 123, 8178-8185.	2.6	4
71	Upgrade of the backscattering spectrometer IN13 at ILL. Applied Physics A: Materials Science and Processing, 2002, 74, s1505-s1507.	2.3	3
72	Changes in protein dynamics induced under Gdn-HCl denaturation. Applied Physics A: Materials Science and Processing, 2002, 74, s1579-s1581.	2.3	3

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73	IN13 Neutron guide and primary spectrometer upgrade. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 908, 182-188.	1.6	3
74	Impact of the Environment on the PNIPAM Dynamical Transition Probed by Elastic Neutron Scattering. Macromolecules, 0, , .	4.8	3
75	TDXAS study of the conformational landscape of MbCO. Journal of Synchrotron Radiation, 1999, 6, 389-391.	2.4	2
76	LOCAL STRUCTURE OF THE CHARGE ORDERED La0.5Ca0.5MnO3. International Journal of Modern Physics B, 2000, 14, 2852-2857.	2.0	2
77	Evidence of local structural transition during oxidation process of RBCO epitaxial films using time resolved reflexafs measurements. European Physical Journal B, 2002, 27, 467-472.	1.5	2
78	Study of Protein Dynamics vs. Amyloid Formation. Zeitschrift Fur Physikalische Chemie, 2010, 224, 215-225.	2.8	2
79	mQfit, a new program for analyzing quasi-elastic neutron scattering data. EPJ Web of Conferences, 2015, 83, 03010.	0.3	2
80	Proton dynamics in bacterial spores, a neutron scattering investigation. EPJ Web of Conferences, 2015, 83, 02003.	0.3	2
81	The molecular dynamics of bacterial spore and the role of calcium dipicolinate in core properties at the sub-nanosecond time-scale. Scientific Reports, 2020, 10, 8265.	3.3	2
82	Local structure andTcsuppression in Bi2Sr2Ca1â^'xYx(Cu1â^'yZny)2O8+Î´superconductor at 1/8 doping. Journal of Synchrotron Radiation, 1999, 6, 752-754.	2.4	1
83	Dynamical properties of oriented lipid membranes studied by elastic incoherent neutron scattering. Physica B: Condensed Matter, 2004, 350, E955-E958.	2.7	1
84	A new gradient monochromator for the IN13 back-scattering spectrometer. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 544, 649-658.	1.6	1
85	Dynamics of Model Membranes. , 2011, , 36-46.		1
86	Co-rebinding in myoglobin as seen by time-resolved X-ray absorption spectroscopy. European Biophysics Journal, 2001, 30, 63-68.	2.2	0
87	2H1400 Dynamics of cardiomyopathy-causing mutant of troponin observed by neutron scattering(Muscle,Oral Presentation,The 50th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2012, 52, S51.	0.1	0
88	The Influence of the Myelin Basic Protein C8 Mutant on the Dynamics of Myelin Membranes. Journal of the Physical Society of Japan, 2013, 82, SA018.	1.6	0
89	Effect of host and environmental factors on asthma control: AIS LIFE project. , 2019, , .		0