

# Francesco Piazza

## List of Publications by Year in descending order

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Version: 2024-02-01

80  
papers

2,394  
citations

257450

24  
h-index

223800

46  
g-index

82  
all docs

82  
docs citations

82  
times ranked

3089  
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis and forecast of COVID-19 spreading in China, Italy and France. <i>Chaos, Solitons and Fractals</i> , 2020, 134, 109761.	5.1	754
2	Functional Dynamics of PDZ Binding Domains: A Normal-Mode Analysis. <i>Biophysical Journal</i> , 2005, 89, 14-21.	0.5	124
3	Discrete Breathers in Nonlinear Network Models of Proteins. <i>Physical Review Letters</i> , 2007, 99, 238104.	7.8	80
4	Freezing immunoglobulins to see them move. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 6466-6471.	7.1	66
5	Diffusion-Limited Reactions in Crowded Environments. <i>Physical Review Letters</i> , 2010, 105, 120601.	7.8	58
6	Discrete breathers in protein structures. <i>Physical Biology</i> , 2008, 5, 026001.	1.8	57
7	Macromolecular crowding: chemistry and physics meet biology (Ascona, Switzerland, 10-14 June 2012). <i>Physical Biology</i> , 2013, 10, 040301.	1.8	54
8	Long-range energy transfer in proteins. <i>Physical Biology</i> , 2009, 6, 046014.	1.8	52
9	The anti-FPU problem. <i>Chaos</i> , 2005, 15, 015110.	2.5	50
10	Disordered Proteins and Network Disorder in Network Descriptions of Protein Structure, Dynamics and Function: Hypotheses and a Comprehensive Review. <i>Current Protein and Peptide Science</i> , 2012, 13, 19-33.	1.4	49
11	Simulation and Theory of Antibody Binding to Crowded Antigen-Covered Surfaces. <i>PLoS Computational Biology</i> , 2016, 12, e1004752.	3.2	49
12	Clinical profile associated with infections in patients with chronic lymphocytic leukemia. Protective role of immunoglobulin replacement therapy. <i>Haematologica</i> , 2015, 100, e515-e518.	3.5	48
13	Catalysis by Metallic Nanoparticles in Solution: Thermosensitive Microgels as Nanoreactors. <i>Zeitschrift Fur Physikalische Chemie</i> , 2018, 232, 773-803.	2.8	42
14	Absence of thermalization for systems with long-range interactions coupled to a thermal bath. <i>Physical Review E</i> , 2013, 87, 042110.	2.1	40
15	Dynamics of antibodies from cryo-electron tomography. <i>Biophysical Chemistry</i> , 2005, 115, 235-240.	2.8	39
16	COVID-19: The unreasonable effectiveness of simple models. <i>Chaos, Solitons and Fractals: X</i> , 2020, 5, 100034.	2.1	35
17	Cooling nonlinear lattices toward energy localization. <i>Chaos</i> , 2003, 13, 637-645.	2.5	32
18	First-order coil-globule transition driven by vibrational entropy. <i>Nature Communications</i> , 2012, 3, 1065.	12.8	32

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19	Theory of diffusion-influenced reactions in complex geometries. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 15950-15954.	2.8	31
20	Slow energy relaxation and localization in 1D lattices. <i>Journal of Physics A</i> , 2001, 34, 9803-9814.	1.6	29
21	Major infections, secondary cancers and autoimmune diseases occur in different clinical subsets of chronic lymphocytic leukaemia patients. <i>European Journal of Cancer</i> , 2017, 72, 103-111.	2.8	29
22	Synergistic Rate Boosting of Collagen Fibrillogenesis in Heterogeneous Mixtures of Crowding Agents. <i>Journal of Physical Chemistry B</i> , 2015, 119, 4350-4358.	2.6	27
23	Integrated CLL Scoring System, a New and Simple Index to Predict Time to Treatment and Overall Survival in Patients With Chronic Lymphocytic Leukemia. <i>Clinical Lymphoma, Myeloma and Leukemia</i> , 2015, 15, 612-620.e5.	0.4	26
24	Slow Energy Relaxation of Macromolecules and Nanoclusters in Solution. <i>Physical Review Letters</i> , 2005, 94, 145502.	7.8	25
25	Prognostic and Predictive Effect of IGHV Mutational Status and Load in Chronic Lymphocytic Leukemia: Focus on FCR and BR Treatments. <i>Clinical Lymphoma, Myeloma and Leukemia</i> , 2019, 19, 678-685.e4.	0.4	25
26	Dissecting the Effects of Concentrated Carbohydrate Solutions on Protein Diffusion, Hydration, and Internal Dynamics. <i>Journal of Physical Chemistry B</i> , 2014, 118, 5310-5321.	2.6	24
27	Bottleneck Genes and Community Structure in the Cell Cycle Network of <i>S. pombe</i> . <i>PLoS Computational Biology</i> , 2007, 3, e103.	3.2	23
28	Conformation-controlled binding kinetics of antibodies. <i>Scientific Reports</i> , 2016, 6, 18976.	3.3	23
29	Stretched-exponential relaxation in arrays of coupled rotators. <i>Physica D: Nonlinear Phenomena</i> , 2005, 204, 230-239.	2.8	20
30	A dynamical study of antibody-antigen encounter reactions. <i>Physical Biology</i> , 2007, 4, 172-180.	1.8	20
31	Hopping in the Crowd to Unveil Network Topology. <i>Physical Review Letters</i> , 2018, 120, 158301.	7.8	20
32	Epidemiology and risk factors of invasive fungal infections in a large cohort of patients with chronic lymphocytic leukemia. <i>Hematological Oncology</i> , 2017, 35, 925-928.	1.7	19
33	Dissipation-driven selection of states in non-equilibrium chemical networks. <i>Communications Chemistry</i> , 2021, 4, .	4.5	19
34	Anticooperativity in diffusion-controlled reactions with pairs of anisotropic domains: a model for the antigen-antibody encounter. <i>European Biophysics Journal</i> , 2005, 34, 899-911.	2.2	18
35	Glasslike Structure of Globular Proteins and the Boson Peak. <i>Physical Review Letters</i> , 2006, 96, 198103.	7.8	18
36	Reaction rate of a composite core-shell nanoreactor with multiple nanocatalysts. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 20758-20767.	2.8	18

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37	Wavelet imaging of transient energy localization in nonlinear systems at thermal equilibrium: The case study of NaI crystals at high temperature. <i>Physical Review B</i> , 2019, 99, .	3.2	18
38	Structural Relaxation Dynamics and Annealing Effects of Sodium Silicate Glass. <i>Journal of Physical Chemistry B</i> , 2013, 117, 5757-5764.	2.6	17
39	Transport of quantum excitations coupled to spatially extended nonlinear many-body systems. <i>New Journal of Physics</i> , 2015, 17, 113030.	2.9	17
40	Equilibrium and non-equilibrium furanose selection in the ribose isomerisation network. <i>Nature Communications</i> , 2021, 12, 2749.	12.8	17
41	Discrete breathers in a realistic coarse-grained model of proteins. <i>Physical Biology</i> , 2011, 8, 046008.	1.8	15
42	Diffusion of tagged particles in a crowded medium. <i>Europhysics Letters</i> , 2014, 107, 20006.	2.0	14
43	Universality of fold-encoded localized vibrations in enzymes. <i>Scientific Reports</i> , 2019, 9, 12835.	3.3	14
44	Heat wave propagation in a nonlinear chain. <i>Physical Review B</i> , 2009, 79, .	3.2	13
45	Crowding, Intermolecular Interactions, and Shear Flow Effects in the Diffusion Model of Chemical Reactions. <i>Journal of Physical Chemistry B</i> , 2011, 115, 7383-7396.	2.6	13
46	Energy transfer in nonlinear network models of proteins. <i>Europhysics Letters</i> , 2009, 88, 68001.	2.0	12
47	Statistical analysis of simple repeats in the human genome. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005, 347, 472-488.	2.6	11
48	Diffusion-limited reactions in crowded environments: a local density approximation. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 375104.	1.8	10
49	Inertial effects in diffusion-limited reactions. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 104116.	1.8	9
50	Optimal search strategies on complex multi-linked networks. <i>Scientific Reports</i> , 2015, 5, 9869.	3.3	9
51	Diffusion-influenced reactions on non-spherical partially absorbing axisymmetric surfaces. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 25896-25906.	2.8	9
52	Diffusion-influenced reactions in a hollow nano-reactor with a circular hole. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 10417-10425.	2.8	8
53	Crowding-Induced Uncompetitive Inhibition of Lactate Dehydrogenase: Role of Entropic Pushing. <i>Journal of Physical Chemistry B</i> , 2020, 124, 727-734.	2.6	8
54	Breather-mediated energy transfer in proteins. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2011, 4, 1247-1266.	1.1	8

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55	Temperature Dependence of Normal Mode Reconstructions of Protein Dynamics. <i>Physical Review Letters</i> , 2009, 102, 218104.	7.8	7
56	Persistent random walk with exclusion. <i>European Physical Journal B</i> , 2013, 86, 1.	1.5	7
57	Nonlinear excitations match correlated motions unveiled by NMR in proteins: a new perspective on allosteric cross-talk. <i>Physical Biology</i> , 2014, 11, 036003.	1.8	7
58	Tracer diffusion in crowded solutions of sticky polymers. <i>Physical Review E</i> , 2020, 102, 032618.	2.1	7
59	Diffusion-Limited Unbinding of Small Peptides from PDZ Domains. <i>Journal of Physical Chemistry B</i> , 2007, 111, 11057-11063.	2.6	5
60	Vibrational entropy and the structural organization of proteins. <i>European Physical Journal E</i> , 2010, 33, 89-96.	1.6	5
61	Irreversible bimolecular reactions with inertia: from the trapping to the target setting at finite densities. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 245101.	1.8	5
62	Macroscopic Transport Equations in Many-Body Systems from Microscopic Exclusion Processes in Disordered Media: A Review. <i>Frontiers in Physics</i> , 2016, 4, .	2.1	5
63	Kinetic theory of hyaluronan cleavage by bovine testicular hyaluronidase in standard and crowded environments. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2021, 1865, 129837.	2.4	5
64	Study of Atomic Motions in $\text{EuBa}_2\text{Cu}_3\text{O}_7$ by Mössbauer and EXAFS Spectroscopies. <i>Journal of Superconductivity and Novel Magnetism</i> , 2001, 14, 675-681.	0.5	4
65	Cutoff lensing: predicting catalytic sites in enzymes. <i>Scientific Reports</i> , 2015, 5, 14874.	3.3	4
66	Exciton transport in the PE545 complex: insight from atomistic QM/MM-based quantum master equations and elastic network models. <i>Physical Biology</i> , 2017, 14, 066001.	1.8	4
67	Point-particle method to compute diffusion-limited cellular uptake. <i>Physical Review E</i> , 2018, 97, 023301.	2.1	4
68	Polyethylene glycol crowding effect on hyaluronidase activity monitored by capillary electrophoresis. <i>Analytical and Bioanalytical Chemistry</i> , 2020, 412, 4195-4207.	3.7	4
69	Clinical Characteristics and Outcome of West Nile Virus Infection in Patients with Lymphoid Neoplasms: An Italian Multicentre Study. <i>HemaSphere</i> , 2020, 4, e395.	2.7	4
70	Resolving the geometry of biomolecules imaged by cryo electron tomography. <i>Journal of Microscopy</i> , 2007, 228, 174-184.	1.8	3
71	Heating Rate Effect on the Activation of Viscoelastic Relaxation in Silicate Glasses. <i>Physics Procedia</i> , 2013, 48, 125-131.	1.2	3
72	Mechanisms for transient localization in a diatomic nonlinear chain. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2021, 102, 105913.	3.3	3

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73	Superconducting cuprates: A simple model of coupling between electronic holes through apical ions. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1998, 246, 451-458.	2.1	2
74	Simple Monte Carlo model for crowd dynamics. <i>Physical Review E</i> , 2010, 82, 026111.	2.1	2
75	On the origin of the boson peak in globular proteins. <i>Philosophical Magazine</i> , 2007, 87, 631-641.	1.6	1
76	On inconsistent entities. A reply to Colyvan. <i>Philosophical Studies</i> , 2010, 150, 301-311.	0.8	1
77	Ficoll as testing material for diffusion weighted imaging-quality assurance phantoms. <i>Magnetic Resonance Imaging</i> , 2021, 76, 1-7.	1.8	1
78	A quantum perturbative pair distribution for determining interatomic potentials from extended x-ray absorption spectroscopy. <i>Journal of Physics Condensed Matter</i> , 2002, 14, 11623-11634.	1.8	0
79	Mesoscale computational protocols for the design of highly cooperative bivalent macromolecules. <i>Scientific Reports</i> , 2020, 10, 7992.	3.3	0
80	Dephasing-Assisted Macrospin Transport. <i>Entropy</i> , 2020, 22, 210.	2.2	0