

# Vittorio Rosato

## List of Publications by Year in descending order

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82  
papers

4,286  
citations

361413

20  
h-index

106344

65  
g-index

88  
all docs

88  
docs citations

88  
times ranked

2547  
citing authors

#	ARTICLE	IF	CITATIONS
1	Tight-binding potentials for transition metals and alloys. <i>Physical Review B</i> , 1993, 48, 22-33.	3.2	1,748
2	Thermodynamical and structural properties of f.c.c. transition metals using a simple tight-binding model. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1989, 59, 321-336.	0.6	990
3	Modelling interdependent infrastructures using interacting dynamical models. <i>International Journal of Critical Infrastructures</i> , 2008, 4, 63.	0.2	392
4	Molecular-dynamics study of surface premelting effects. <i>Physical Review B</i> , 1986, 33, 1860-1870.	3.2	136
5	Topological properties of high-voltage electrical transmission networks. <i>Electric Power Systems Research</i> , 2007, 77, 99-105.	3.6	131
6	Comparative behavior of carbon in b.c.c. and f.c.c. iron. <i>Acta Metallurgica</i> , 1989, 37, 2759-2763.	2.1	58
7	Molecular-dynamics calculations of thermodynamic properties of metastable alloys. <i>Physical Review B</i> , 1997, 55, 837-842.	3.2	57
8	Atomic hydrogen adsorption on a Stone-Wales defect in graphite. <i>Surface Science</i> , 2002, 496, 33-38.	1.9	55
9	Thermodynamic behavior of the carbon schwarzite fcc(C36) <sub>2</sub> . <i>Physical Review B</i> , 1999, 60, 16928-16933.	3.2	42
10	Experimental and theoretical investigation of the order-disorder transformation in Ni <sub>3</sub> Al. <i>Journal of Materials Research</i> , 1993, 8, 2504-2509.	2.6	36
11	Atomic-Scale Modeling of the Interaction between Short Polypeptides and Carbon Surfaces. <i>Journal of Physical Chemistry B</i> , 2009, 113, 12105-12112.	2.6	34
12	Simulation of growth of Ni-Zr interfacial amorphous regions under nonequilibrium conditions. <i>Physical Review B</i> , 1994, 50, 2850-2857.	3.2	33
13	Evidence for cysteine clustering in thermophilic proteomes. <i>Trends in Genetics</i> , 2002, 18, 278-281.	6.7	33
14	Order-disorder transition in Cu <sub>3</sub> Au: A combined molecular-dynamics and cluster-variation-method approach. <i>Physical Review B</i> , 1993, 47, 14541-14544.	3.2	24
15	Lattice dynamics of ordered and disordered Cu <sub>3</sub> Au with a tight-binding potential model. <i>Philosophical Magazine Letters</i> , 1993, 67, 369-378.	1.2	24
16	Role of defective icosahedra in undercooled copper. <i>Physical Review B</i> , 2007, 75, .	3.2	24
17	Is the topology of the Internet network really fit to sustain its function?. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008, 387, 1689-1704.	2.6	24
18	Dynamic Kerr-effect and dielectric relaxation of polarizable dipolar molecules. Transient response including linear and non-linear effects. <i>Journal of the Chemical Society, Faraday Transactions 2</i> , 1981, 77, 1767.	1.1	21

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19	Structure and dynamics of the anti-AMCV scFv(F8): Effects of selected mutations on the antigen combining site. <i>Journal of Structural Biology</i> , 2008, 164, 119-133.	2.8	21
20	Advanced services for critical infrastructures protection. <i>Journal of Ambient Intelligence and Humanized Computing</i> , 2015, 6, 783-795.	4.9	20
21	Parameter estimate of signal transduction pathways. <i>BMC Neuroscience</i> , 2006, 7, S6.	1.9	19
22	Roughening transition on the (110) face of argon: A molecular dynamics study. <i>Surface Science</i> , 1985, 162, 150-155.	1.9	18
23	Analysis of the electronic structure of hydrogenated amorphous carbon via Auger spectroscopy. <i>Applied Surface Science</i> , 1999, 152, 10-18.	6.1	18
24	Design of DSS for Supporting Preparedness to and Management of Anomalous Situations in Complex Scenarios. <i>Studies in Systems, Decision and Control</i> , 2016, , 195-232.	1.0	18
25	Designing hardware for protein sequence analysis. <i>Bioinformatics</i> , 2003, 19, 1739-1740.	4.1	17
26	Assessing Earthquake Impacts and Monitoring Resilience of Historic Areas: Methods for GIS Tools. <i>ISPRS International Journal of Geo-Information</i> , 2021, 10, 461.	2.9	16
27	Mechanical alloying of immiscible elements: Experimental results on Ag-Cu and Co-Cu. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1997, 76, 651-662.	0.6	14
28	Atomistic simulation of liquid lead and lead-bismuth eutectic. <i>Journal of Nuclear Materials</i> , 2002, 301, 64-69.	2.7	14
29	A Geospatial Decision Support Tool for Seismic Risk Management: Florence (Italy) Case Study. <i>Lecture Notes in Computer Science</i> , 2017, , 278-293.	1.3	14
30	A comprehensive system for semantic spatiotemporal assessment of risk in urban areas. <i>Journal of Contingencies and Crisis Management</i> , 2020, 28, 178-193.	2.8	12
31	Towards a Decision Support Tool for Assessing, Managing and Mitigating Seismic Risk of Electric Power Networks. <i>Lecture Notes in Computer Science</i> , 2017, , 399-414.	1.3	12
32	Stability of a Distributed Generation Network Using the Kuramoto Models. <i>Lecture Notes in Computer Science</i> , 2009, , 14-23.	1.3	12
33	A molecular dynamics simulation of the effects of excess free volume on the diffusion in metallic glasses. <i>Journal of Non-Crystalline Solids</i> , 1992, 144, 187-195.	3.1	10
34	The role of chemical disorder and volume expansion in crystal-to-amorphous transitions: simulation results for NiZr <sub>2</sub> and Cu <sub>3</sub> Au. <i>Journal of Alloys and Compounds</i> , 1993, 194, 439-445.	5.5	10
35	Mechanical Instability of Oxidized Metal Clusters. <i>Physical Review Letters</i> , 1996, 77, 2495-2498.	7.8	10
36	Critical Infrastructure Disruption Scenarios Analyses via Simulation. <i>Studies in Systems, Decision and Control</i> , 2016, , 43-61.	1.0	9

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37	Atomic simulation of a palladium nanophase. <i>Scripta Materialia</i> , 1995, 6, 751-754.	0.5	8
38	The study of the microscopic scale structure of carbon-based materials: a comparison between Auger-derived density of states structures and molecular dynamics simulations. <i>Surface Science</i> , 2000, 467, 139-151.	1.9	8
39	Evaluation of communicative and functional abilities in Wolf-Hirshhorn syndrome. <i>Journal of Intellectual Disability Research</i> , 2002, 46, 575-582.	2.0	8
40	Thermodynamic behavior of a carbon schwarzite. <i>Computational Materials Science</i> , 2001, 20, 387-393.	3.0	7
41	Modeling Resilience in Electrical Distribution Networks. , 0, , .		7
42	Assessing Earthquake-Induced Urban Rubble by Means of Multiplatform Remotely Sensed Data. <i>ISPRS International Journal of Geo-Information</i> , 2020, 9, 262.	2.9	7
43	Critical Infrastructures Vulnerability: The Highway Networks. , 2008, , 201-216.		7
44	Molecular dynamics calculations for low-energy helium atoms on a nickel surface. <i>Journal of Physics Condensed Matter</i> , 1989, 1, 10021-10037.	1.8	6
45	Phase stability of Ni-Al solid solutions. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1993, 68, 845-851.	0.6	6
46	Atomic model of a palladium nanostructure. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1995, 204, 101-106.	5.6	6
47	A fine functional homology between chitinases from host and parasite is relevant for malaria transmissibility. <i>Parasitology Research</i> , 2007, 101, 639-645.	1.6	6
48	On Modelling of Inter-dependent Network Infrastructures by Extended Leontief Models. <i>Lecture Notes in Computer Science</i> , 2010, , 1-13.	1.3	6
49	A multi-state barrier model for the multiple dielectric relaxations of bulk amorphous polymers and related glass-forming systems. <i>Advances in Molecular Relaxation and Interaction Processes</i> , 1981, 20, 233-248.	0.5	5
50	Interfacial free energy of a two-dimensional bicrystal. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1984, 100, 195-197.	2.1	5
51	Static atomic displacements in Ni-rich Ni-Al. <i>Europhysics Letters</i> , 2001, 54, 482-487.	2.0	5
52	A DOMAIN SPECIFIC LANGUAGE FOR THE DESCRIPTION AND THE SIMULATION OF SYSTEMS OF INTERACTING SYSTEMS. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , 2012, 15, 1250072.	1.4	5
53	An high performance Fortran implementation of a Tight-Binding Molecular Dynamics simulation. <i>Computer Physics Communications</i> , 1999, 120, 255-268.	7.5	4
54	Operational Resilience Metrics for a Complex Electrical Network. <i>Lecture Notes in Computer Science</i> , 2018, , 60-71.	1.3	4

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55	Earthquake Simulation on Urban Areas: Improving Contingency Plans by Damage Assessment. Lecture Notes in Computer Science, 2019, , 72-83.	1.3	4
56	Operational Resilience Metrics for Complex Inter-Dependent Electrical Networks. Applied Sciences (Switzerland), 2021, 11, 5842.	2.5	4
57	Integrating Resilience in Time-based Dependency Analysis: A Large-Scale Case Study for Urban Critical Infrastructures. , 0, , .		4
58	A Decision Support System for Emergency Management of Critical Infrastructures Subjected to Natural Hazards. Lecture Notes in Computer Science, 2016, , 362-367.	1.3	4
59	On the Use of a Heterogeneous MIMDâ€“SIMD Platform to Simulate the Dynamics of Globular Clusters with a Central Massive Object. Journal of Computational Physics, 2001, 174, 208-225.	3.8	3
60	Astrocomp: web technologies for high performance computing on a network of supercomputers. Computer Physics Communications, 2005, 166, 17-25.	7.5	3
61	REAL-TIME ASSESSMENT OF PERFORMANCE INDICATORS FOR BRIDGES TO SUPPORT ROAD NETWORK MANAGEMENT IN THE AFTERMATHS OF EARTHQUAKE EVENTS. , 2021, , .		3
62	Preventing and Managing Risks Induced by Natural Hazards to Critical Infrastructures. Infrastructures, 2022, 7, 76.	2.8	3
63	A molecular dynamics model for the study of helium on transition metals. Computer Physics Communications, 1989, 54, 251-256.	7.5	2
64	Volume distribution of empty regions in disordered structures. Computational Materials Science, 1995, 3, 359-367.	3.0	2
65	Defect energetics, thermal stability and localized electronic states in carbon nanotubes. Materials Research Society Symposia Proceedings, 2000, 633, 1481.	0.1	2
66	A Complex Systemâ€™s View of Critical Infrastructures. , 2008, , 241-260.		2
67	The Contribution of NEISAS to EP3R. Lecture Notes in Computer Science, 2013, , 175-186.	1.3	2
68	Structural and thermodynamical behaviour of a solid surface under stress: a molecular dynamics study. Journal of Physics C: Solid State Physics, 1987, 20, 1231-1240.	1.5	1
69	Deuterium clusters in a strained palladium lattice. Journal of Materials Research, 1990, 5, 2094-2099.	2.6	1
70	Ab-initio modelling of atomic and molecular Hydrogen adsorption in graphite. Materials Research Society Symposia Proceedings, 2001, 677, 471.	0.1	1
71	Evidence for cystine clustering in thermophilic proteomes. Trends in Genetics, 2003, 19, 607-608.	6.7	1
72	Asymptotic states and topological structure of an activationâ€“deactivation chemical network. Journal of Theoretical Biology, 2007, 245, 423-432.	1.7	1

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73	Stability of a model of power microgeneration network using the Kuramoto model. International Journal of System of Systems Engineering, 2010, 2, 76.	0.5	1
74	Inter-System Software Adapter for Decision Support by Interfacing Disaster Response Platforms &&& Simulation Platforms. , 2012, , .		1
75	Towards ontological foundations of knowledge related to the emissions trading system. , 2013, , .		1
76	Simulation of Cascading Outages in (Inter)-Dependent Services and Estimate of Their Societal Consequences. Lecture Notes in Computer Science, 2017, , 340-345.	1.3	1
77	Atomistic simulation of the interaction of slow protons with an iron surface. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1993, 15, 1263-1272.	0.4	0
78	Ab-initio modelling of atomic and molecular Hydrogen adsorption in graphite. Materials Research Society Symposia Proceedings, 2001, 677, 4111.	0.1	0
79	Dedicated hardware for linearly-scaling algorithms in condensed-matter physics. Computer Physics Communications, 2001, 139, 20-33.	7.5	0
80	Interdependency Effects Measured on Complex Interdependent Networks. , 2010, , .		0
81	Semantic Modeling of the Emissions Trading System. , 2013, , .		0
82	A Decision Support System for mitigating the seismic risk of electric distribution networks: learnings from the Central Italy earthquake sequence 2016â€“2017. , 2019, , .		0