Lorenzo Malerba

List of Publications by Year
in descending order

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37 papers	1,431 citations	567281 15 h-index	526287 27 g-index
38 all docs	38 docs citations	38 times ranked	1142 citing authors

#	Article	IF	Citations
1	Materials for Sustainable Nuclear Energy: A European Strategic Research and Innovation Agenda for All Reactor Generations. Energies, 2022, 15, 1845.	3.1	13
2	Advances on GenIV structural and fuel materials and cross-cutting activities between fission and fusion. EPJ Nuclear Sciences & Technologies, 2020, 6, 32.	0.7	5
3	Large Scale Integrated Materials Modeling Programs. , 2020, , 881-916.		4
4	The dominant mechanisms for the formation of solute-rich clusters in low-Cu steels under irradiation. Materials Today Energy, 2020, 17, 100472.	4.7	19
5	On the role of integrated computer modelling in fusion technology. Fusion Engineering and Design, 2020, 157, 111671.	1.9	11
6	TEM Observation of Loops Decorating Dislocations and Resulting Source Hardening of Neutron-Irradiated Fe-Cr Alloys. Metals, 2020, 10, 147.	2.3	10
7	Improving atomic displacement and replacement calculations with physically realistic damage models. Nature Communications, 2018, 9, 1084.	12.8	241
8	Primary radiation damage: A review of current understanding and models. Journal of Nuclear Materials, 2018, 512, 450-479.	2.7	358
9	Analysis of Radiation Damage in Light Water Reactors: Comparison of Cluster Analysis Methods for the Analysis of Atom Probe Data. Microscopy and Microanalysis, 2017, 23, 366-375.	0.4	40
10	Microstructure Evolution in Fe and Fe-Cr Alloys with OKMC Methods. EPJ Web of Conferences, 2016, 115, 03001.	0.3	5
11	An object kinetic Monte Carlo model for the microstructure evolution of neutronâ€irradiated reactor pressure vessel steels. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2974-2980.	1.8	14
12	Object kinetic Monte Carlo study of the effect of grain boundaries in martensitic Feâ€“Crâ€“C alloys. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2981-2987.	1.8	6
13	Stability and mobility of small vacancyâ€“solute complexes in Feâ€“MnNi and dilute Feâ€“X alloys: A kinetic Monte Carlo study. Nuclear Instruments & Methods in Physics Research B, 2015, 352, 61-66.	1.4	23
14	Interaction of a screw dislocation with Cu-precipitates, nanovoids and Cuâ€“vacancy clusters in BCC iron. Journal of Nuclear Materials, 2012, 421, 32-38.	2.7	33
15	Innovative materials for Gen IV systems and transmutation facilities: The cross-cutting research project GETMAT. Nuclear Engineering and Design, 2011, 241, 3514-3520.	1.7	33
16	Simulation of defect evolution in electron-irradiated dilute FeCr alloys. Journal of Nuclear Materials, 2011, 417, 1078-1081.	2.7	9
17	Metropolis Monte-Carlo simulation of segregation in Feâ€“Cr alloys. Journal of Nuclear Materials, 2011, 417, 1082-1085.	2.7	33
18	Interaction of an edge dislocation with Cuâ€“Ni-vacancy clusters in bcc iron. Journal of Nuclear Materials, 2011, 419, 134-139.	2.7	25

#	Article	IF	Citations
19	Positron annihilation spectroscopy on binary Feâ€“Cr alloys and ferritic/martensitic steels after neutron irradiation. Acta Materialia, 2011, 59, 6547-6555.	7.9	57
20	Overview of RPV Sub-Project of PERFORM 60. , 2010, , .		0
21	Iron-Copper-Nickel Many-Body Potential Consistent With Thermodynamics. , 2009, , .		0
22	Interplay of strengthening mechanisms in the interaction of a Â½â€ˆ111â€‰ screw dislocation with Cr precipitates in bcc Fe: An atomistic study. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 3155-3158.	1.4	8
23	Multiscale modelling of radiation damage and phase transformations: The challenge of FeCr alloys. Journal of Nuclear Materials, 2008, 382, 112-125.	2.7	127
24	Formation of stable sessile interstitial complexes in reactions between glissile dislocation loops in bcc Fe. Journal of Nuclear Materials, 2008, 382, 126-133.	2.7	36
25	Metropolis Monte Carlo simulations of ordering and clustering in FeCr alloys. Materials Research Society Symposia Proceedings, 2008, 1125, 1.	0.1	3
26	Use of computational intelligence for the prediction of vacancy migration energies in atomistic kinetic monte carlo simulations. International Journal of Computational Intelligence Systems, 2008, 1, 340.	2.7	6
27	Simulation of thermal ageing and radiation damage in Feâ€“Cr. Nuclear Instruments & Methods in Physics Research B, 2007, 255, 68-74.	1.4	15
28	Object kinetic Monte Carlo study of sink strengths. Journal of Nuclear Materials, 2007, 360, 159-169.	2.7	72
29	<title>Mutual reaction between interstitial clusters in bcc Fe</title>. Proceedings of SPIE, 2006, 6597, 118.	0.8	0
30	<title>In-cascade formation of plain vacancy cluster and its stability in pure Fe: MD study</title>. , 2006, 6253, 72.		0
31	Multiscale Modelling of bcc-Fe Based Alloys for Nuclear Applications [PowerPoint Submission]. Materials Research Society Symposia Proceedings, 2006, 978, .	0.1	0
32	ARTIFICIAL INTELLIGENCE APPLIED TO SIMULATION OF RADIATION DAMAGE IN FERRITIC ALLOYS. , 2006, , .		0
33	Atomic scale study of single self interstitial atom diffusivity in bcc Fe-Cr using molecular dynamics simulation. , 2005, , .		0
34	An Integrated Approach to Fusion Material Research at SCKÂ·CEN. Fusion Science and Technology, 2005, 47, 895-900.	1.1	0
35	Two-band modeling ofÎ±-prime phase formation in Fe-Cr. Physical Review B, 2005, 72, .	3.2	189
36	<title>Calculations of vacancy binding energies to Cu-V complexes in FeCu alloys</title>. , 2004, 5400, 100.		0

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37	State of Advancement of the International REVE Project: Computational Modelling of Irradiation-Induced Hardening in Reactor Pressure Vessel Steels and Relevant Experimental Validation Programme. , 2002, , 267.		7