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	Primary radiation damage: A review of current understanding and models. Journal of Nuclear Materials, 2018, 512, 450-479.	2.7	358
2	Improving atomic displacement and replacement calculations with physically realistic damage models. Nature Communications, 2018, 9, 1084.	12.8	241
3	Two-band modeling ofÎ±-prime phase formation in Fe-Cr. Physical Review B, 2005, 72, .	3.2	189
4	Multiscale modelling of radiation damage and phase transformations: The challenge of FeCr alloys. Journal of Nuclear Materials, 2008, 382, 112-125.	2.7	127
5	Object kinetic Monte Carlo study of sink strengths. Journal of Nuclear Materials, 2007, 360, 159-169.	2.7	72
6	Positron annihilation spectroscopy on binary Feâ€“Cr alloys and ferritic/martensitic steels after neutron irradiation. Acta Materialia, 2011, 59, 6547-6555.	7.9	57
7	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
8	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
9	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
10	Metropolis Monte-Carlo simulation of segregation in Feâ€“Cr alloys. Journal of Nuclear Materials, 2011, 417, 1082-1085.	2.7	33
11	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
12	Interaction of an edge dislocation with Cuâ€“Ni-vacancy clusters in bcc iron. Journal of Nuclear Materials, 2011, 419, 134-139.	2.7	25
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	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
15	Simulation of thermal ageing and radiation damage in Feâ€“Cr. Nuclear Instruments & Methods in Physics Research B, 2007, 255, 68-74.	1.4	15
16	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
17	Materials for Sustainable Nuclear Energy: A European Strategic Research and Innovation Agenda for All Reactor Generations. Energies, 2022, 15, 1845.	3.1	13
18	On the role of integrated computer modelling in fusion technology. Fusion Engineering and Design, 2020, 157, 111671.	1.9	11

#	Article	IF	Citations
19	TEM Observation of Loops Decorating Dislocations and Resulting Source Hardening of Neutron-Irradiated Fe-Cr Alloys. Metals, 2020, 10, 147.	2.3	10
20	Simulation of defect evolution in electron-irradiated dilute FeCr alloys. Journal of Nuclear Materials, 2011, 417, 1078-1081.	2.7	9
21	Interplay of strengthening mechanisms in the interaction of a Â½ã€ˆ111ã€‰ 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
22	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
23	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
24	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
25	Microstructure Evolution in Fe and Fe-Cr Alloys with OKMC Methods. EPJ Web of Conferences, 2016, 115, 03001.	0.3	5
26	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
27	Large Scale Integrated Materials Modeling Programs. , 2020, , 881-916.		4
28	Metropolis Monte Carlo simulations of ordering and clustering in FeCr alloys. Materials Research Society Symposia Proceedings, 2008, 1125, 1.	0.1	3
29	<title>Calculations of vacancy binding energies to Cu-V complexes in FeCu alloys</title>. , 2004, 5400, 100.		0
30	Atomic scale study of single self interstitial atom diffusivity in bcc Fe-Cr using molecular dynamics simulation. , 2005, , .		0
31	An Integrated Approach to Fusion Material Research at SCKÂ·CEN. Fusion Science and Technology, 2005, 47, 895-900.	1.1	0
32	<title>Mutual reaction between interstitial clusters in bcc Fe</title>. Proceedings of SPIE, 2006, 6597, 118.	0.8	0
33	<title>In-cascade formation of plain vacancy cluster and its stability in pure Fe: MD study</title>. , 2006, 6253, 72.		0
34	Multiscale Modelling of bcc-Fe Based Alloys for Nuclear Applications [PowerPoint Submission]. Materials Research Society Symposia Proceedings, 2006, 978, .	0.1	0
35	Iron-Copper-Nickel Many-Body Potential Consistent With Thermodynamics. , 2009, , .		0
36	Overview of RPV Sub-Project of PERFORM 60. , 2010, , .		0

#	Article	IF	Citations
37	ARTIFICIAL INTELLIGENCE APPLIED TO SIMULATION OF RADIATION DAMAGE IN FERRITIC ALLOYS. , 2006, , .		0