Andrea E. Sand

List of Publications by Year
in descending order

39	1,915	304743	345221
papers	citations	22 h-index	36 g-index

39	39	39	1297
all docs	docs citations	times ranked	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	High-energy collision cascades in tungsten: Dislocation loops structure and clustering scaling laws. Europhysics Letters, 2013, 103, 46003.	2.0	174
4	Recent advances in modeling and simulation of the exposure and response of tungsten to fusion energy conditions. Nuclear Fusion, 2017, 57, 092008.	3.5	113
5	Direct observation of size scaling and elastic interaction between nano-scale defects in collision cascades. Europhysics Letters, 2015, 110, 36001.	2.0	102
6	Radiation damage production in massive cascades initiated by fusion neutrons in tungsten. Journal of Nuclear Materials, 2014, 455, 207-211.	2.7	79
7	Non-equilibrium properties of interatomic potentials in cascade simulations in tungsten. Journal of Nuclear Materials, 2016, 470, 119-127.	2.7	63
8	A multi-scale model for stresses, strains and swelling of reactor components under irradiation. Nuclear Fusion, 2018, 58, 126002.	3.5	61
9	On the onset of void swelling in pure tungsten under neutron irradiation: An object kinetic Monte Carlo approach. Journal of Nuclear Materials, 2017, 493, 280-293.	2.7	57
10	Cascade fragmentation: deviation from power law in primary radiation damage. Materials Research Letters, 2017, 5, 357-363.	8.7	56
11	Multiscale modelling of plasmaâ€“wall interactions in fusion reactor conditions. Journal Physics D: Applied Physics, 2014, 47, 224018.	2.8	55
12	Defect structures and statistics in overlapping cascade damage in fusion-relevant bcc metals. Journal of Nuclear Materials, 2018, 511, 64-74.	2.7	48
13	Surface effects and statistical laws of defects in primary radiation damage: Tungsten vs. iron. Europhysics Letters, 2016, 115, 36001.	2.0	46
14	Object kinetic Monte Carlo model for neutron and ion irradiation in tungsten: Impact of transmutation and carbon impurities. Journal of Nuclear Materials, 2018, 500, 15-25.	2.7	42
15	Cascade debris overlap mechanism of â©100âª dislocation loop formation in Fe and FeCr. Europhysics Letters, 2017, 119, 56003.	2.0	40
16	Subcascade formation and defect cluster size scaling in high-energy collision events in metals. Europhysics Letters, 2016, 115, 26001.	2.0	38
17	Relaxation volumes of microscopic and mesoscopic irradiation-induced defects in tungsten. Journal of Applied Physics, 2019, 126, .	2.5	35
18	Directional Sensitivity in Light-Mass Dark Matter Searches with Single-Electron-Resolution Ionization Detectors. Physical Review Letters, 2018, 120, 111301.	7.8	33

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19	Direct observation of the spatial distribution of primary cascade damage in tungsten. Acta Materialia, 2018, 144, 905-917.	7.9	33
20	Collision cascades overlapping with self-interstitial defect clusters in Fe and W. Journal of Physics Condensed Matter, 2019, 31, 245402.	1.8	33
21	Deuterium retention in tungsten irradiated by different ions. Nuclear Fusion, 2020, 60, 096002.	3.5	32
22	On the lower energy limit of electronic stopping in simulated collision cascades in Ni, Pd and Pt. Journal of Nuclear Materials, 2015, 456, 99-105.	2.7	29
23	The influence of carbon impurities on the formation of loops in tungsten irradiated with self-ions. Journal of Nuclear Materials, 2019, 527, 151808.	2.7	24
24	Radiation damage in tungsten from cascade overlap with voids and vacancy clusters. Journal of Physics Condensed Matter, 2019, 31, 405402.	1.8	22
25	Heavy ion ranges from first-principles electron dynamics. Npj Computational Materials, 2019, 5, .	8.7	21
26	Atomistic-object kinetic Monte Carlo simulations of irradiation damage in tungsten. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 055003.	2.0	15
27	Effects of cascade-induced dislocation structures on the long-term microstructural evolution in tungsten. Computational Materials Science, 2020, 181, 109727.	3.0	11
28	Experimental observation of the number of visible defects produced in individual primary damage cascades in irradiated tungsten. Europhysics Letters, 2018, 122, 66001.	2.0	10
29	A model of defect cluster creation in fragmented cascades in metals based on morphological analysis. Journal of Physics Condensed Matter, 2018, 30, 405701.	1.8	10
30	A solution of the uniform word problem for ortholattices. Mathematical Structures in Computer Science, 2010, 20, 625-638.	0.6	7
31	Classification of clusters in collision cascades. Computational Materials Science, 2020, 172, 109364.	3.0	7
32	Graph theory based approach to characterize self interstitial defect morphology. Computational Materials Science, 2021, 195, 110474.	3.0	7
33	Sputtering of Be/C/W compounds in molecular dynamics and ERO simulations. Journal of Nuclear Materials, 2013, 438, S589-S593.	2.7	4
34	The effect of C concentration on radiation damage in Feâ€“Crâ€“C alloys. Journal of Nuclear Materials, 2013, 442, S782-S785.	2.7	4
35	Comparison of SIA defect morphologies from different interatomic potentials for collision cascades in W. Modelling and Simulation in Materials Science and Engineering, 2021, 29, 065015.	2.0	3
36	Unusual irradiation-induced disordering in Cu3Au near the critical temperature: An in situ study using electron diffraction. Journal of Materials Research, 2018, 33, 3841-3848.	2.6	1

#	Article	IF	Citations
37	Incorporating Electronic Effects in Molecular Dynamics Simulations of Neutron and Ion-Induced Collision Cascades. , 2020, , 2413-2436.		1
38	Incorporating Electronic Effects in Molecular Dynamics Simulations of Neutron and Ion-Induced Collision Cascades. , 2018, , 1-25.		0
39	Incorporating Electronic Effects in Molecular Dynamics Simulations of Neutron and Ion-Induced Collision Cascades. , 2019, , 1-25.		0