Dilpuneet S Aidhy

List of Publications by Year
in descending order

39 papers	1,205 citations	331670 21 h-index	377865 34 g-index
40 all docs	40 docs citations	40 times ranked	1475 citing authors

#	Article	IF	Citations
1	Point defect evolution in Ni, NiFe and NiCr alloys from atomistic simulations and irradiation experiments. Acta Materialia, 2015, 99, 69-76.	7.9	120
2	Damage accumulation in ion-irradiated Ni-based concentrated solid-solution alloys. Acta Materialia, 2016, 109, 17-22.	7.9	114
3	Influence of chemical disorder on energy dissipation and defect evolution in advanced alloys. Journal of Materials Research, 2016, 31, 2363-2375.	2.6	110
4	Entropy contributions to phase stability in binary random solid solutions. Npj Computational Materials, 2018, 4, .	8.7	64
5	The effect of electronic energy loss on irradiation-induced grain growth in nanocrystalline oxides. Physical Chemistry Chemical Physics, 2014, 16, 8051-8059.	2.8	62
6	Chemical expansion affected oxygen vacancy stability in different oxide structures from first principles calculations. Computational Materials Science, 2015, 99, 298-305.	3.0	58
7	Vacancyâ€Ordered Structure of Cubic Bismuth Oxide from Simulation and Crystallographic Analysis. Journal of the American Ceramic Society, 2008, 91, 2349-2356.	3.8	45
8	Forging Fast Ion Conducting Nanochannels with Swift Heavy Ions: The Correlated Role of Local Electronic and Atomic Structure. Journal of Physical Chemistry C, 2017, 121, 975-981.	3.1	44
9	Formation and growth of stacking fault tetrahedra in Ni via vacancy aggregation mechanism. Scripta Materialia, 2016, 114, 137-141.	5.2	42
10	Strain-Induced Phase and Oxygen-Vacancy Stability in Ionic Interfaces from First-Principles Calculations. Journal of Physical Chemistry C, 2014, 118, 30139-30144.	3.1	37
11	Comparison of point-defect clustering in irradiated CeO2 and UO2: A unified view from molecular dynamics simulations and experiments. Scripta Materialia, 2011, 65, 867-870.	5.2	35
12	Fast ion conductivity in strained defect-fluorite structure created by ion tracks in Gd2Ti2O7. Scientific Reports, 2015, 5, 16297.	3.3	33
13	Impact of segregation energetics on oxygen conductivity at ionic grain boundaries. Journal of Materials Chemistry A, 2014, 2, 1704-1709.	10.3	31
14	Investigation of oxygen point defects in cubic ZrO 2 by density functional theory. Computational Materials Science, 2014, 92, 22-27.	3.0	29
15	Grain-boundary source/sink behavior for point defects: An atomistic simulation study. International Journal of Materials Research, 2009, 100, 550-555.	0.3	28
16	Strained Ionic Interfaces: Effect on Oxygen Diffusivity from Atomistic Simulations. Journal of Physical Chemistry C, 2014, 118, 4207-4212.	3.1	27
17	Effect of ionic polarizability on oxygen diffusion in Î´-Bi2O3 from atomistic simulation. Ionics, 2010, 16, 297-303.	2.4	25
18	Segregation and binding energetics at grain boundaries in fluorite oxides. Journal of Materials Chemistry A, 2017, 5, 4026-4035.	10.3	24

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19	A statistical approach for atomistic calculations of vacancy formation energy and chemical potentials in concentrated solid-solution alloys. Computational Materials Science, 2021, 190, 110308.	3.0	24
20	Cr-induced fast vacancy cluster formation and high Ni diffusion in concentrated Ni-Fe-Cr alloys. Journal of Alloys and Compounds, 2017, 725, 449-460.	5.5	23
21	Machine Learning Enabled Prediction of Stacking Fault Energies in Concentrated Alloys. Metals, 2020, 10, 1072.	2.3	23
22	Microstructure design for fast oxygen conduction. Journal of Materials Research, 2016, 31, 2-16.	2.6	22
23	The evolution mechanism of the dislocation loops in irradiated lanthanum doped cerium oxide. Journal of Nuclear Materials, 2014, 445, 209-217.	2.7	21
24	Radiation damage in cubic ZrO2 and yttria-stabilized zirconia from molecular dynamics simulations. Scripta Materialia, 2015, 98, 16-19.	5.2	20
25	Machine Learning Based Methodology to Predict Point Defect Energies in Multi-Principal Element Alloys. Frontiers in Materials, 2021, 8, .	2.4	19
26	Structure of Î´-Bi2O3 from density functional theory: A systematic crystallographic analysis. Journal of Solid State Chemistry, 2009, 182, 1222-1228.	2.9	17
27	Predicting vibrational entropy of fcc solids uniquely from bond chemistry using machine learning. Materialia, 2020, 12, 100804.	2.7	15
28	Stabilizing nanocrystalline grains in ceramic-oxides. Physical Chemistry Chemical Physics, 2013, 15, 18915.	2.8	11
29	Oxygen diffusion in ThO₂â€“CeO₂ and ThO₂â€“UO₂ solid solutions from atomistic calculations. Physical Chemistry Chemical Physics, 2016, 18, 15019-15024.	2.8	11
30	Factors affecting the vacancy formation energy in Fe70Ni10Cr20 random concentrated alloy. Computational Materials Science, 2021, 198, 110669.	3.0	10
31	(001) SrTiO₃ | (001) MgO Interface and Oxygen-Vacancy Stability from First-Principles Calculations. ACS Applied Materials & Interfaces, 2014, 6, 15536-15541.	8.0	9
32	Cation and vacancy disorder in U_{1â^'y}Nd_yO_{2.00â^'x}alloys. Journal of Materials Research, 2015, 30, 3026-3040.	2.6	9
33	Effect of atomic order/disorder on vacancy clustering in concentrated NiFe alloys. Computational Materials Science, 2018, 147, 194-203.	3.0	9
34	â^3 Twin Boundaries in Gd₂Ti₂O₇ Pyrochlore: Pathways for Oxygen Migration. ACS Applied Materials & Interfaces, 2020, 12, 45558-45563.	8.0	9
35	Coupling between interfacial strain and oxygen vacancies at complex-oxides interfaces. Journal of Applied Physics, 2021, 129, 171102.	2.5	9
36	Breaking atomic-level ordering via biaxial strain in functional oxides: A DFT study. Journal of Applied Physics, 2021, 129, 095301.	2.5	8

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37	Effect of atomic order/disorder on Cr segregation in Ni-Fe alloys. Journal of Applied Physics, 2018, 124, .	2.5	4
38	On the Response of Ionic Crystals to Irradiation. Nuclear Technology, 2013, 182, 138-144.	1.2	2
39	Effect of different point-defect energetics in Ni80X20 (X=Fe, Pd) on contrasting vacancy cluster formation from atomistic simulations. Materialia, 2021, 15, 100974.	2.7	2