

Biswanath Dutta

List of Publications by Year in descending order

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923
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#	ARTICLE	IF	CITATIONS
1	Beyond Solid Solution High-Entropy Alloys: Tailoring Magnetic Properties via Spinodal Decomposition. <i>Advanced Functional Materials</i> , 2021, 31, 2007668.	14.9	51
2	Tailoring nanostructured NbCoSn-based thermoelectric materials via crystallization of an amorphous precursor. <i>Nano Energy</i> , 2021, 80, 105518.	16.0	19
3	Decisive role of interstitial defects in half-Heusler semiconductors: An <i>ab initio</i> study. <i>Physical Review Materials</i> , 2021, 5, .	2.4	6
4	A Combined Experimental and First-Principles Based Assessment of Finite-Temperature Thermodynamic Properties of Intermetallic Al ₃ Sc. <i>Materials</i> , 2021, 14, 1837.	2.9	5
5	Hidden Effects of Negative Stacking Fault Energies in Complex Concentrated Alloys. <i>Physical Review Letters</i> , 2021, 126, 255502.	7.8	18
6	Robust evidence for the stabilization of the premartensite phase in Ni-Mn-In magnetic shape memory alloys by chemical pressure. <i>Physical Review Materials</i> , 2021, 5, .	2.4	3
7	Frontiers in atomistic simulations of high entropy alloys. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	40
8	Phonons in magnetically disordered materials: Magnetic versus phononic time scales. <i>Physical Review B</i> , 2020, 101, .	3.2	8
9	Unfolding the complexity of phonon quasi-particle physics in disordered materials. <i>Npj Computational Materials</i> , 2020, 6, .	8.7	22
10	Unveiling the mechanism of abnormal magnetic behavior of FeNiCoMnCu high-entropy alloys through a joint experimental-theoretical study. <i>Physical Review Materials</i> , 2020, 4, .	2.4	18
11	Role of magnetic ordering for the design of quinary TWIP-TRIP high entropy alloys. <i>Physical Review Materials</i> , 2020, 4, .	2.4	18
12	Temperature-dependent phonon spectra of magnetic random solid solutions. <i>Npj Computational Materials</i> , 2018, 4, .	8.7	19
13	Impact of Co and Fe Doping on the Martensitic Transformation and the Magnetic Properties in Ni-Mn-Based Heusler Alloys. <i>Physica Status Solidi (B): Basic Research</i> , 2018, 255, 1700455.	1.5	14
14	Coupling Phenomena in Magnetocaloric Materials. <i>Energy Technology</i> , 2018, 6, 1429-1447.	3.8	15
15	<i>Adaptive modulation in the</i> $N \times M \times n^{1.4}$	3.2	18
16	Role of disorder when upscaling magnetocaloric Ni-Co-Mn-Al Heusler alloys from thin films to ribbons. <i>Scientific Reports</i> , 2018, 8, 9147.	3.3	19
17	<i>Ab initio</i> explanation of disorder and off-stoichiometry in Fe-Mn-Al-C carbides. <i>Physical Review B</i> , 2017, 95, .	3.2	29
18	Low-temperature features in the heat capacity of unary metals and intermetallics for the example of bulk aluminum and Al ₃ Sc.	3.2	12

#	ARTICLE	IF	CITATIONS
19	Robust Bain distortion in the premartensite phase of a platinum-substituted Ni ₂ MnGa magnetic shape memory alloy. <i>Nature Communications</i> , 2017, 8, 1006.	12.8	26
20	Effect of Pt substitution on the magnetocrystalline anisotropy of $\text{Ni}_{1-x}\text{Pt}_x\text{Mn}_2\text{Sn}$: A competition between chemistry and elasticity. <i>Physical Review B</i> , 2017, 96, .	3.2	2
21	Interface effects on the magnetic properties of layered Ni ₂ MnGa/Ni ₂ MnSn alloys: A first-principles investigation. <i>Functional Materials Letters</i> , 2016, 09, 1642010.	1.2	9
22	Ab Initio Prediction of Martensitic and Intermartensitic Phase Boundaries in Ni-Mn-Ga. <i>Physical Review Letters</i> , 2016, 116, 025503.	7.8	57
23	Interplay of strain and interdiffusion in Heusler alloy bilayers. <i>Physica Status Solidi - Rapid Research Letters</i> , 2015, 9, 321-325.	2.4	5
24	Ab Initio Nonequilibrium Thermodynamic and Transport Properties of Ultrafast Laser Irradiated 316L Stainless Steel. <i>Journal of Physical Chemistry C</i> , 2015, 119, 11438-11446.	3.1	46
25	Ab Initio Predicted Impact of Pt on Phase Stabilities in Ni-Mn-Ga Heusler Alloys. <i>Journal of Phase Equilibria and Diffusion</i> , 2014, 35, 695-700.	1.4	11
26	Temperature Dependent Magnon-Phonon Coupling in bcc Fe from Theory and Experiment. <i>Physical Review Letters</i> , 2014, 113, 165503.	7.8	93
27	Thickness dependent exchange bias in martensitic epitaxial Ni-Mn-Sn thin films. <i>AIP Advances</i> , 2013, 3, .	1.3	17
28	First-principles study of magnetism in Pd ₃ Fe under pressure. <i>Physical Review B</i> , 2012, 86, .	3.2	13
29	A new first principles approach to calculate phonon spectra of disordered alloys. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 015402.	1.8	15
30	Ab Initio Based Prediction of Phase Diagrams: Application to Magnetic Shape Memory Alloys. <i>Advanced Engineering Materials</i> , 2012, 14, 547-561.	3.5	37
31	Vibrational properties of Ni _{1-x} Pt _x alloys: An understanding from ab initio calculations. <i>Journal of Applied Physics</i> , 2011, 109, 053714.	2.5	9
32	First-principles based investigation on effects of magnetism on lattice dynamics in Fe ₇₂ Pd ₂₈ alloy. <i>Intermetallics</i> , 2010, 18, 1143-1147.	3.9	6
33	Ab initio calculation of phonon dispersions in size-mismatched disordered alloys. <i>Physical Review B</i> , 2010, 82, .	3.2	14
34	Phonon spectra of Pd _x Fe _{1-x} alloys with transferable force constants. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 395401.	1.8	10
35	The phonon spectra and elastic constants of Pd _x Fe _{1-x} : an understanding from inter-atomic interactions. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 095411.	1.8	8