Scott T Dunham

List of Publications by Year
in descending order

57	829	516710 16	501196 28
papers	citations	h-index	g-index

59	59	59	1140
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Universal machine learning framework for defect predictions in zinc blende semiconductors. Patterns, 2022, 3, 100450.	5.9	22
2	Reduced photothermal heating in diamonds enriched with H3 point defects. Journal of Applied Physics, 2022, 131, 234401.	2.5	0
3	Understanding copper diffusion in CuInSe2 with first-principles based atomistic and continuum models. Journal of Applied Physics, 2021, 130, .	2.5	1
4	Nonvolatile Electrically Reconfigurable Integrated Photonic Switch Enabled by a Silicon PIN Diode Heater. Advanced Materials, 2020, 32, e2001218.	21.0	152
5	Modeling Electrical Switching of Nonvolatile Phase-Change Integrated Nanophotonic Structures with Graphene Heaters. ACS Applied Materials & Interfaces, 2020, 12, 21827-21836.	8.0	78
6	Window into NV center kinetics via repeated annealing and spatial tracking of thousands of individual NV centers. Physical Review Materials, 2020, 4, .	2.4	21
7	Spinodal Decomposition During Anion Exchange in Colloidal Mn²⁺-Doped CsPbX₃ (X = Cl, Br) Perovskite Nanocrystals. Chemistry of Materials, 2019, 31, 7711-7722.	6.7	36
8	Atomistic models of Cu diffusion in CuInSe2 under variations in composition. Journal of Applied Physics, 2018, 123, 115116.	2.5	2
9	Defects in Na-, K-, and Cd-Doped CuInSe$_2$: Canonical Thermodynamics Based on Ab Initio Calculations. IEEE Journal of Photovoltaics, 2017, 7, 1143-1152.	2.5	5
10	The Impact of Charged Grain Boundaries on CdTe Solar Cell: EBIC Measurements Not Predictive of Device Performance. IEEE Journal of Photovoltaics, 2017, 7, 329-334.	2.5	12
11	Interaction of O_{2i} Dimers with Ga in Si and Implications for a Comprehensive Model of Light- Induced Degradation. , 2017, , .		0
12	Variation of Band Gap and Lattice Parameters of Î²â^'(Al_xGa_{1â^'x})₂O₃ Powder Produced by Solution Combustion Synthesis. Journal of the American Ceramic Society, 2016, 99, 2467-2473.	3.8	87
13	Enhanced EBIC response but degraded solar cell performance for CdTe grain boundaries. , 2016, , .		1
14	First-principles calculations of Na and K impurities in CuInSe<inf>2</inf> and their effect on Cd incorporation. , 2016, , .		2
15	Monte Carlo modeling of phase separation in CuIn<inf>x</inf>Ga<inf>1â^'x</inf>Se<inf>2</inf>. , 2016, , .		1
16	Kinetics of Isovalent (Cd²⁺) and Aliovalent (In³⁺) Cation Exchange in Cd_{1â€“x}Mn_xSe Nanocrystals. Journal of the American Chemical Society, 2016, 138, 12885-12893.	13.7	30
17	Ab Initio Study of Carbon Impurities in Cu$_2$ ZnSnS$_4$. IEEE Journal of Photovoltaics, 2016, 6, 562-570.	2.5	3
18	Calculation of Defect Concentrations and Phase Stability in Cu$_2$ ZnSnS$_4$ and Cu$_2$ ZnSnSe$_4$ From Stoichiometry. IEEE Journal of Photovoltaics, 2015, 5, 1188-1196.	2.5	17

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19	Alignment of the diamond nitrogen vacancy center by strain engineering. Applied Physics Letters, 2014, 105, .	3.3	22
20	Formation energies of carbon related defects in Cu<inf>2</inf>ZnSnS<inf>4</inf>. , 2014, , .		0
21	Calculation of defect concentrations in Cu<inf>2</inf>ZnSnS<inf>4</inf> from stoichiometry. , 2014, , .		0
22	Phosphorus vacancy cluster model for phosphorus diffusion gettering of metals in Si. Journal of Applied Physics, 2014, 115, 054906.	2.5	24
23	Design of Anodic Aluminum Oxide Rear Surface Plasmonic Heterostructures for Light Trapping in Thin Silicon Solar Cells. IEEE Journal of Photovoltaics, 2014, 4, 1212-1219.	2.5	10
24	Combined three-dimensional electromagnetic and device modeling of surface plasmon-enhanced organic solar cells incorporating low aspect ratio silver nanoprisms. Applied Physics Letters, 2013, 103, 183303.	3.3	12
25	Coupled modeling of evolution of impurity/defect distribution and cell performance. , 2012, , .		3
26	A model for phosphosilicate glass deposition via POCl3 for control of phosphorus dose in Si. Journal of Applied Physics, 2012, 112, 124912.	2.5	18
27	Analyzing emitter dopant inhomogeneities at textured Si surfaces by using 3D process and device simulations in combination with SEM imaging. , 2012, , .		8
28	Molecular dynamics modeling of solid phase epitaxial regrowth. Journal of Applied Physics, 2012, 111, 114504.	2.5	3
29	3D Optical and device simulation of surface plasmonic effects on organic solar cells using silver nano prisms. , 2011, , .		2
30	Correlation factors for interstitial-mediated self-diffusion in the diamond lattice: Kinetic lattice Monte Carlo approach. Physical Review B, 2011, 83, .	3.2	5
31	End-to-end predictive modeling of silicon solar cell performance: From process recipe to device simulation. , 2011, , .		2
32	Ab Initio Calculations of Crystalline and Amorphous In2Se3 Compounds for Chalcogenide Phase Change Memory. Materials Research Society Symposia Proceedings, 2010, 1251, 34.	0.1	0
33	Simulation of grain boundary effects on electronic transport in metals, and detailed causes of scattering. Physica Status Solidi (B): Basic Research, 2010, 247, 1791-1796.	1.5	55
34	Kinetic lattice Monte Carlo simulations of interdiffusion in strained silicon germanium alloys. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C1G18-C1G23.	1.2	6
35	Optical and Electrical Modeling of Polymer Thin-film Photovoltaics. Materials Research Society Symposia Proceedings, 2010, 1270, 1.	0.1	0
36	Multiscale modeling of nanoscale device fabrication. , 2010, , .		1

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37	Calculation of Cu/Ta interface electron transmission and effect on conductivity in nanoscale interconnect technology. Applied Physics Letters, 2009, 95, .	3.3	26
38	Stress effects on impurity solubility in crystalline materials: A general model and density-functional calculations for dopants in silicon. Physical Review B, 2009, 79, .	3.2	26
39	A comparison of optical modulator structures using a matrix simulation approach. Optical and Quantum Electronics, 2008, 40, 431-437.	3.3	0
40	Dependence of resistivity on surface profile in nanoscale metal films and wires. Journal of Applied Physics, 2008, 103, .	2.5	23
41	Atomistic modeling of dopant diffusion and segregation in strained SiGeC. , 2008, , .		1
42	Charge carrier induced lattice strain and stress effects on As activation in Si. Applied Physics Letters, 2008, 93, .	3.3	10
43	Calculation of dopant segregation ratios at semiconductor interfaces. Physical Review B, 2008, 78, .	3.2	8
44	Calculations of codoping effects between combinations of donors (P/As/Sb) and acceptors (B/Ga/In) in Si. Journal of Applied Physics, 2007, 102, 123709.	2.5	3
45	Stress Effects on As Activation in Si. Materials Research Society Symposia Proceedings, 2007, 994, 1.	0.1	0
46	Predictive models for co-doping effects between combinations of donors (P/As/Sb) and acceptors (B/Ga/In). , 2006, , .		1
47	First principles calculations of dopant solubility based on strain compensation and direct binding between dopants and group IV impurities. Journal of Vacuum Science & Technology B, 2006, 24, 700.	1.3	12
48	Modeling of Defect Evolution and TED under Stress based on DFT Calculations. , 2006, , .		3
49	Accurate modeling of copper precipitation kinetics including Fermi level dependence. Applied Physics Letters, 2006, 89, 182106.	3.3	9
50	Atomistic Simulations of Effect of Coulombic Interactions on Carrier Fluctuations in Doped Silicon. Materials Research Society Symposia Proceedings, 2003, 765, 1.	0.1	1
51	A combined model for {311} defect and dislocation loop evolution: Analytical formulation of kinetic precipitation model. Journal of Applied Physics, 2002, 91, 2883-2889.	2.5	8
52	Modeling Fermi Level Effects in Atomistic Simulations. Materials Research Society Symposia Proceedings, 2002, 717, 1.	0.1	5
53	Ab-initio Calculations to Model Anomalous Fluorine Behavior. Materials Research Society Symposia Proceedings, 2002, 717, 1.	0.1	11
54	Modeling of Annealing of High Concentration Arsenic Profiles. Materials Research Society Symposia Proceedings, 2001, 669, 1.	0.1	1

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55	A simple continuum model for boron clustering based on atomistic calculations. Journal of Applied Physics, 2001, 89, 3650-3655.	2.5	23
56	Modeling of vacancy cluster formation in ion implanted silicon. Journal of Applied Physics, 2001, 89, 4758-4765.	2.5	15
57	Understanding and Modeling Ramp Rate Effects on Shallow Junction Formation. Materials Research Society Symposia Proceedings, 2000, 610, 481.	0.1	2