Supratik Guha

List of Publications by Year
in descending order

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49	5,158	172457 29	206112 48
papers	citations	h-index	g-index

50	50	50	7077
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamic-quenching of a single-photon avalanche photodetector using an adaptive resistive switch. Nature Communications, 2022, 13, 1517.	12.8	5
2	A Wireless Underground Sensor Network Field Pilot for Agriculture and Ecology: Soil Moisture Mapping Using Signal Attenuation. Sensors, 2022, 22, 3913.	3.8	8
3	Key Device and Materials Specifications for a Repeater Enabled Quantum Internet. IEEE Transactions on Quantum Engineering, 2021, 2, 1-9.	4.9	6
4	Nanoporous Dielectric Resistive Memories Using Sequential Infiltration Synthesis. ACS Nano, 2021, 15, 4155-4164.	14.6	12
5	Entrepreneurial Talent Building for 21st Century Agricultural Innovation. ACS Nano, 2021, 15, 10748-10758.	14.6	17
6	Response to Letters to the Editor on Aerosol Filtration Efficiency of Common Fabrics Used in Respiratory Cloth Masks: Revised and Expanded Results. ACS Nano, 2020, 14, 10764-10770.	14.6	27
7	Epitaxial Er-doped Y2O3 on silicon for quantum coherent devices. APL Materials, 2020, 8, .	5.1	23
8	Aerosol Filtration Efficiency of Common Fabrics Used in Respiratory Cloth Masks. ACS Nano, 2020, 14, 6339-6347.	14.6	709
9	Nanophotonic quantum network nodes based on epitaxial rare-earth on silicon heterostructures. , 2020, , .		0
10	Silicon compatible Sn-based resistive switching memory. Nanoscale, 2018, 10, 9441-9449.	5.6	24
11	Preface to Special Topic: New Physics and Materials for Neuromorphic Computation. Journal of Applied Physics, 2018, 124, .	2.5	7
12	Electrically Driven Insulatorâ€“Metal Transition-Based Devicesâ€"Part II: Transient Characteristics. IEEE Transactions on Electron Devices, 2018, 65, 3989-3995.	3.0	7
13	Electrically Driven Insulatorâ€“Metal Transition-Based Devicesâ€"Part I: The Electrothermal Model and Experimental Analysis for the DC Characteristics. IEEE Transactions on Electron Devices, 2018, 65, 3982-3988.	3.0	10
14	Closed Loop Controlled Precision Irrigation Sensor Network. IEEE Internet of Things Journal, 2018, 5, 4580-4588.	8.7	30
15	Accelerating Materials Development via Automation, Machine Learning, and High-Performance Computing. Joule, 2018, 2, 1410-1420.	24.0	210
16	Sequential Infiltration Synthesis for the Design of Low Refractive Index Surface Coatings with Controllable Thickness. ACS Nano, 2017, 11, 2521-2530.	14.6	84
17	Thin-film photovoltaics: Buffer against degradation. Nature Energy, 2017, 2, .	39.5	5
18	Thoreau: A subterranean wireless sensing network for agriculture and the environment. , 2017, , .		30

#	Article	IF	Citations
19	Monolithic Perovskiteâ€CIGS Tandem Solar Cells via In Situ Band Gap Engineering. Advanced Energy Materials, 2015, 5, 1500799.	19.5	219
20	The impact of sodium on the sub-bandgap states in CZTSe and CZTS. Applied Physics Letters, 2015, 106, .	3.3	51
21	Cu₂ZnSnSe₄ Thinâ€Film Solar Cells by Thermal Coâ€evaporation with 11.6% Efficiency and Improved Minority Carrier Diffusion Length. Advanced Energy Materials, 2015, 5, 1401372.	19.5	408
22	The Role of Sodium as a Surfactant and Suppressor of Nonâ€Radiative Recombination at Internal Surfaces in Cu₂ZnSnS₄. Advanced Energy Materials, 2015, 5, 1400849.	19.5	186
23	Understanding the relationship between Cu2ZnSn(S,Se)4 material properties and device performance. MRS Communications, 2014, 4, 159-170.	1.8	59
24	Perovskite-kesterite monolithic tandem solar cells with high open-circuit voltage. Applied Physics Letters, 2014, 105, .	3.3	175
25	Epitaxial growth of kesterite Cu2ZnSnS4 on a Si(001) substrate by thermal co-evaporation. Thin Solid Films, 2014, 556, 9-12.	1.8	52
26	Thin film solar cell with 8.4% power conversion efficiency using an earthâ€abundant Cu₂ZnSnS₄ absorber. Progress in Photovoltaics: Research and Applications, 2013, 21, 72-76.	8.1	1,054
27	Relationship between Cu2ZnSnS4 quasi donor-acceptor pair density and solar cell efficiency. Applied Physics Letters, 2013, 103, .	3.3	44
28	Photoluminescence characterization of a high-efficiency Cu2ZnSnS4 device. Journal of Applied Physics, 2013, 114, .	2.5	84
29	Heteroepitaxial silicon film growth at 600Â°C from an Alâ€“Si eutectic melt. Thin Solid Films, 2010, 518, 5368-5371.	1.8	10
30	Microstructural effects on electrical conductivity relaxation in nanoscale ceria thin films. Journal of Chemical Physics, 2009, 130, 174711.	3.0	14
31	Photocurrent Induced by Nonradiative Energy Transfer from Nanocrystal Quantum Dots to Adjacent Silicon Nanowire Conducting Channels: Toward a New Solar Cell Paradigm. Nano Letters, 2009, 9, 4548-4552.	9.1	79
32	Growth System, Structure, and Doping of Aluminum-Seeded Epitaxial Silicon Nanowires. Nano Letters, 2009, 9, 3296-3301.	9.1	73
33	Measurement of Carrier Mobility in Silicon Nanowires. Nano Letters, 2008, 8, 1566-1571.	9.1	113
34	Gate Oxides Beyond SiO₂. MRS Bulletin, 2008, 33, 1017-1025.	3.5	127
35	Oxygen Vacancies in High Dielectric Constant Oxide-Semiconductor Films. Physical Review Letters, 2007, 98, 196101.	7.8	182
36	Realization of a Linear Germanium Nanowire pâ€"n Junction. Nano Letters, 2006, 6, 2070-2074.	9.1	81

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37	Charge Defects, Vt Shifts, and the Solution to the High-K Metal Gate n-MOSFET Problem. ECS Transactions, 2006, 3, 247-252.	0.5	2
38	Materials Interaction at the Nanoscale in High-k Metal Gate Stacks: The Role of Oxygen. ECS Transactions, 2006, 1, 363-370.	0.5	9
39	Effect of oxide overlayer formation on the growth of gold catalyzed epitaxial silicon nanowires. Applied Physics Letters, 2006, 88, 103113.	3.3	27
40	Absence of magnetism in hafnium oxide films. Applied Physics Letters, 2005, 87, 252502.	3.3	202
41	Charge trapping studies on ultrathin ZrO2 and HfO2 high-k dielectrics grown by room temperature ultraviolet ozone oxidation. Applied Physics Letters, 2004, 84, 389-391.	3.3	30
42	Growth and characterization of epitaxial Si/(LaxY1âˆ’x)2O3/Si heterostructures. Journal of Applied Physics, 2003, 93, 251-258.	2.5	34
43	Lattice-matched, epitaxial, silicon-insulating lanthanum yttrium oxide heterostructures. Applied Physics Letters, 2002, 80, 766-768.	3.3	62
44	Compatibility Challenges for High-<i>Ä¸</i> Materials Integration into CMOS Technology. MRS Bulletin, 2002, 27, 226-229.	3.5	43
45	Impact of moisture on charge trapping and flatband voltage in Al2O3 gate dielectric films. Applied Physics Letters, 2002, 81, 2608-2610.	3.3	41
46	Transplanted Si films on arbitrary substrates using GaN underlayers. Applied Physics Letters, 2000, 76, 1264-1266.	3.3	3
47	Multicolored light emitters on silicon substrates. Applied Physics Letters, 1998, 73, 1487-1489.	3.3	84
48	Ultraviolet and violet GaN light emitting diodes on silicon. Applied Physics Letters, 1998, 72, 415-417.	3.3	286
49	Synthesis of metastable phases via pulsed-laser-induced reactive quenching at liquid-solid interfaces. Physical Review B, 1987, 36, 8237-8250.	3.2	63