

Suk-Ho Choi

List of Publications by Year in descending order

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papers

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citations

186265

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98
docs citations

98
times ranked

4708
citing authors

#	ARTICLE	IF	CITATIONS
1	Anomalous Behaviors of Visible Luminescence from Graphene Quantum Dots: Interplay between Size and Shape. ACS Nano, 2012, 6, 8203-8208.	14.6	563
2	High photoresponsivity in an all-graphene p-n vertical junction photodetector. Nature Communications, 2014, 5, 3249.	12.8	161
3	Plasmon-Enhanced Ultraviolet Photoluminescence from Hybrid Structures of Graphene/ZnO Films. Physical Review Letters, 2010, 105, 127403.	7.8	127
4	High-performance graphene-quantum-dot photodetectors. Scientific Reports, 2014, 4, 5603.	3.3	123
5	Near-Ultraviolet-Sensitive Graphene/Porous Silicon Photodetectors. ACS Applied Materials & Interfaces, 2014, 6, 20880-20886.	8.0	84
6	Graphene transparent conductive electrodes doped with graphene quantum dots-mixed silver nanowires for highly-flexible organic solar cells. Journal of Alloys and Compounds, 2018, 744, 1-6.	5.5	68
7	Graphene-Based Semiconductor Heterostructures for Photodetectors. Micromachines, 2018, 9, 350.	2.9	68
8	Semitransparent Flexible Organic Solar Cells Employing Doped-Graphene Layers as Anode and Cathode Electrodes. ACS Applied Materials & Interfaces, 2018, 10, 3596-3601.	8.0	67
9	Size-dependence of Raman scattering from graphene quantum dots: Interplay between shape and thickness. Applied Physics Letters, 2013, 102, .	3.3	63
10	Graphene p-n Vertical Tunneling Diodes. ACS Nano, 2013, 7, 5168-5174.	14.6	61
11	Highly efficient CH ₃ NH ₃ PbI ₃ perovskite solar cells prepared by AuCl ₃ -doped graphene transparent conducting electrodes. Chemical Engineering Journal, 2017, 323, 153-159.	12.7	61
12	Rapid-thermal-annealing surface treatment for restoring the intrinsic properties of graphene field-effect transistors. Nanotechnology, 2013, 24, 405301.	2.6	56
13	Graphene/Si-Quantum-Dot Heterojunction Diodes Showing High Photosensitivity Compatible with Quantum Confinement Effect. Advanced Materials, 2015, 27, 2614-2620.	21.0	56
14	Graphene/porous silicon Schottky-junction solar cells. Journal of Alloys and Compounds, 2017, 715, 291-296.	5.5	53
15	Nonvolatile-Memory Characteristics of AlO_x -Implanted Al_2O_3 . IEEE Electron Device Letters, 2009, 30, 837-839.	3.9	50
16	Optical properties of thermally annealed hafnium oxide and their correlation with structural change. Journal of Applied Physics, 2008, 104, .	2.5	48
17	Graphene/Si-nanowire heterostructure molecular sensors. Scientific Reports, 2014, 4, 5384.	3.3	47
18	Microstructure, optical property, and electronic band structure of cuprous oxide thin films. Journal of Applied Physics, 2011, 110, .	2.5	45

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19	Dimensionally Engineered Perovskite Heterostructure for Photovoltaic and Optoelectronic Applications. <i>Advanced Energy Materials</i> , 2019, 9, 1902470.	19.5	40
20	Recent Studies of Semitransparent Solar Cells. <i>Coatings</i> , 2018, 8, 329.	2.6	39
21	Lamination-produced semi-transparent/flexible perovskite solar cells with doped-graphene anode and cathode. <i>Journal of Alloys and Compounds</i> , 2019, 775, 905-911.	5.5	38
22	Doping- and size-dependent photovoltaic properties of p-type Si-quantum-dot heterojunction solar cells: correlation with photoluminescence. <i>Applied Physics Letters</i> , 2010, 97, 072108.	3.3	34
23	Enhanced ultraviolet emission from hybrid structures of single-walled carbon nanotubes/ZnO films. <i>Applied Physics Letters</i> , 2009, 94, 213113.	3.3	32
24	Energy transfer from an individual silica nanoparticle to graphene quantum dots and resulting enhancement of photodetector responsivity. <i>Scientific Reports</i> , 2016, 6, 27145.	3.3	32
25	Enhancement of efficiency in graphene/porous silicon solar cells by co-doping graphene with gold nanoparticles and bis(trifluoromethanesulfonyl)-amide. <i>Journal of Materials Chemistry C</i> , 2017, 5, 9005-9011.	5.5	32
26	Enhanced Flexibility and Stability in Perovskite Photodiodeâ€“Solar Cell Nanosystem Using MoS ₂ Electron-Transport Layer. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 4586-4593.	8.0	32
27	Graphene-Assisted Chemical Etching of Silicon Using Anodic Aluminum Oxides as Patterning Templates. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 24242-24246.	8.0	30
28	Enhancement of Stability of Inverted Flexible Perovskite Solar Cells by Employing Graphene-Quantum-Dots Hole Transport Layer and Graphene Transparent Electrode Codoped with Gold Nanoparticles and Bis(trifluoromethanesulfonyl)amide. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 13178-13185.	6.7	29
29	Self-powered and flexible perovskite photodiode/solar cell bifunctional devices with MoS ₂ hole transport layer. <i>Applied Surface Science</i> , 2020, 514, 145880.	6.1	29
30	Enhancement of Memory Performance Using Doubly Stacked Si-Nanocrystal Floating Gates Prepared by Ion Beam Sputtering in UHV. <i>IEEE Transactions on Electron Devices</i> , 2007, 54, 359-362.	3.0	28
31	Highly-flexible graphene transparent conductive electrode/perovskite solar cells with graphene quantum dots-doped PCBM electron transport layer. <i>Dyes and Pigments</i> , 2019, 170, 107630.	3.7	28
32	Size-dependent radiative decay processes in graphene quantum dots. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	27
33	Growth of two-dimensional Janus MoSSe by a single in situ process without initial or follow-up treatments. <i>NPG Asia Materials</i> , 2022, 14, .	7.9	27
34	Enhancement of efficiency and stability in organic solar cells by employing MoS ₂ transport layer, graphene electrode, and graphene quantum dots-added active layer. <i>Applied Surface Science</i> , 2021, 538, 148155.	6.1	26
35	Degradation reduction and stability enhancement of p-type graphene by RhCl ₃ doping. <i>Journal of Alloys and Compounds</i> , 2015, 621, 1-6.	5.5	25
36	Effect of layer number on flexible perovskite solar cells employing multiple layers of graphene as transparent conductive electrodes. <i>Journal of Alloys and Compounds</i> , 2018, 744, 404-411.	5.5	25

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37	Enhancement of the effectiveness of graphene as a transparent conductive electrode by AgNO ₃ doping. <i>Nanotechnology</i> , 2014, 25, 125701.	2.6	23
38	Effect of layer number and metal-chloride dopant on multiple layers of graphene/porous Si solar cells. <i>Journal of Applied Physics</i> , 2018, 123, 123101.	2.5	22
39	Use of Graphene for Solar Cells. <i>Journal of the Korean Physical Society</i> , 2018, 72, 1442-1453.	0.7	21
40	High-Performance n-i-p-Type Perovskite Photodetectors Employing Graphene-Transparent Conductive Electrodes N-Type Doped with Amine Group Molecules. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 734-739.	6.7	21
41	Highly-flexible and -stable deep-ultraviolet photodiodes made of graphene quantum dots sandwiched between graphene layers. <i>Dyes and Pigments</i> , 2019, 163, 238-242.	3.7	21
42	All-two-dimensional semitransparent and flexible photodetectors employing graphene/MoS ₂ /graphene vertical heterostructures. <i>Journal of Alloys and Compounds</i> , 2021, 864, 158118.	5.5	21
43	Enhancement of efficiency and long-term stability in graphene/Si-quantum-dot heterojunction photodetectors by employing bis(trifluoromethanesulfonyl)-amide as a dopant for graphene. <i>Journal of Materials Chemistry C</i> , 2017, 5, 12737-12743.	5.5	20
44	Light-induced negative differential resistance in graphene/Si-quantum-dot tunneling diodes. <i>Scientific Reports</i> , 2016, 6, 30669.	3.3	19
45	Precise and selective sensing of DNA-DNA hybridization by graphene/Si-nanowires diode-type biosensors. <i>Scientific Reports</i> , 2016, 6, 31984.	3.3	19
46	Graphene-based vertical-junction diodes and applications. <i>Journal of the Korean Physical Society</i> , 2017, 71, 311-318.	0.7	17
47	Graphene/Si solar cells employing triethylenetetramine dopant and polymethylmethacrylate antireflection layer. <i>Applied Surface Science</i> , 2018, 433, 181-187.	6.1	17
48	Porous silicon solar cells with 13.66% efficiency achieved by employing graphene-quantum-dots interfacial layer, doped-graphene electrode, and bathocuproine back-surface passivation layer. <i>Journal of Alloys and Compounds</i> , 2021, 877, 160311.	5.5	17
49	High-Detectivity/-Speed Flexible and Self-Powered Graphene Quantum Dots/Perovskite Photodiodes. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 19961-19968.	6.7	16
50	Performance enhancement of graphene/porous Si solar cells by employing layer-controlled MoS ₂ . <i>Applied Surface Science</i> , 2020, 532, 147460.	6.1	16
51	High-speed heterojunction photodiodes made of single- or multiple-layer MoS ₂ directly-grown on Si quantum dots. <i>Journal of Alloys and Compounds</i> , 2020, 820, 153074.	5.5	14
52	Highly-flexible perovskite photodiodes employing doped multilayer-graphene transparent conductive electrodes. <i>Nanotechnology</i> , 2018, 29, 425203.	2.6	13
53	High-efficient ultraviolet emission in phonon-reduced ZnO films: The role of germanium. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	12
54	Nonvolatile memories of Ge nanodots self-assembled by depositing ultrasmall amount Ge on SiO ₂ at room temperature. <i>Applied Physics Letters</i> , 2008, 92, 093124.	3.3	11

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55	Nonvolatile memories using deep traps formed in Al ₂ O ₃ by metal ion implantation. Applied Physics Letters, 2009, 94, 112110.	3.3	11
56	Formation characteristics and photoluminescence of Ge nanocrystals in HfO ₂ . Journal of Applied Physics, 2009, 105, .	2.5	11
57	Significantly-enhanced Stabilities in Flexible Hybrid Organic-Inorganic Perovskite Resistive Random Access Memories by Employing Multilayer Graphene Transparent Conductive Electrodes. Journal of the Korean Physical Society, 2018, 73, 934-939.	0.7	11
58	Remarkable enhancement of stability in high-efficiency Si-quantum-dot heterojunction solar cells by employing bis(trifluoromethanesulfonyl)-amide as a dopant for graphene transparent conductive electrodes. Journal of Alloys and Compounds, 2019, 773, 913-918.	5.5	11
59	Anisotropic Terahertz Emission from Bi ₂ Se ₃ Thin Films with Inclined Crystal Planes. Nanoscale Research Letters, 2015, 10, 489.	5.7	10
60	Highly-stable and -flexible graphene/(CF ₃ SO ₂) ₂ NH/graphene transparent conductive electrodes for organic solar cells. Nanotechnology, 2017, 28, 425203.	2.6	10
61	High-Performance Conducting Polymer/Si Nanowires Hybrid Solar Cells Using Multilayer-Graphene Transparent Conductive Electrode and Back Surface Passivation Layer. ACS Sustainable Chemistry and Engineering, 2018, 6, 12446-12452.	6.7	10
62	Graphene-nanomesh transparent conductive electrode/porous-Si Schottky-junction solar cells. Journal of Alloys and Compounds, 2019, 803, 958-963.	5.5	10
63	InAs on GaAs Photodetectors Using Thin InAlAs Graded Buffers and Their Application to Exceeding Short-Wave Infrared Imaging at 300K. Scientific Reports, 2019, 9, 12875.	3.3	10
64	Photostable electron-transport-layer-free flexible graphene quantum dots/perovskite solar cells by employing bathocuproine interlayer. Journal of Alloys and Compounds, 2021, 886, 161355.	5.5	10
65	Effect of (O, As) dual implantation on p-type doping of ZnO films. Journal of Applied Physics, 2011, 110, 103708.	2.5	9
66	Formation of three-dimensional GaAs microstructures by combination of wet and metal-assisted chemical etching. Physica Status Solidi - Rapid Research Letters, 2014, 8, 345-348.	2.4	9
67	Effect of nitrogen doping on the structural and the optical variations of graphene quantum dots by using hydrazine treatment. Journal of the Korean Physical Society, 2015, 67, 746-751.	0.7	9
68	Nonvolatile memories by using charge traps in silicon-rich oxides. Journal of Applied Physics, 2010, 108, 033708.	2.5	8
69	Graded-size Si-nanocrystal-multilayer solar cells. Journal of Applied Physics, 2012, 112, .	2.5	8
70	Self-powered Ag-nanowires-doped graphene/Si quantum dots/Si heterojunction photodetectors. Journal of Alloys and Compounds, 2018, 758, 32-37.	5.5	8
71	High-performance and -stability graphene quantum dots-mixed conducting polymer/porous Si hybrid solar cells with titanium oxide passivation layer. Nanotechnology, 2020, 31, 095202.	2.6	8
72	Optical Sensing Properties of ZnO Nanoparticles Prepared by Spray Pyrolysis. Journal of Nanoscience and Nanotechnology, 2019, 19, 1048-1051.	0.9	7

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73	High-detectivity and -stability multilayer-graphene/Si-quantum-dot photodetectors with TiO _x back-surface passivation layer. <i>Dyes and Pigments</i> , 2019, 170, 107587.	3.7	7
74	High trap density and long retention time from self-assembled amorphous Si nanocluster floating gate nonvolatile memory. <i>Applied Physics Letters</i> , 2006, 89, 243513.	3.3	6
75	Effect of Ga doping concentration on the luminescence efficiency of GaN light-emitting diodes with Ga-doped ZnO contacts. <i>Applied Physics B: Lasers and Optics</i> , 2012, 109, 283-287.	2.2	6
76	High-Quality 100 nm Thick InSb Films Grown on GaAs(001) Substrates with an In _x Al _{1-x} Sb Continuously Graded Buffer Layer. <i>ACS Omega</i> , 2018, 3, 14562-14566.	3.5	5
77	Photovoltaic and luminescence properties of Sb- and P-doped Si quantum dots. <i>Journal of the Korean Physical Society</i> , 2012, 60, 1616-1619.	0.7	4
78	In-situ monitoring of AuCl ₃ -doping and -dedoping behaviors in graphene. <i>Journal of the Korean Physical Society</i> , 2014, 64, 1327-1330.	0.7	4
79	Successful Fabrication of GaN Epitaxial Layer on Non-Catalytically-grown Graphene. <i>Bulletin of the Korean Chemical Society</i> , 2016, 37, 1004-1009.	1.9	4
80	Strong enhancement of emission efficiency in GaN light-emitting diodes by plasmon-coupled light amplification of graphene. <i>Nanotechnology</i> , 2018, 29, 055201.	2.6	4
81	Possible permanent Dirac- to Weyl-semimetal phase transition by ion implantation. <i>NPG Asia Materials</i> , 2022, 14, .	7.9	4
82	Optical study of bulk and thin-film tin dioxide. <i>Journal of the Korean Physical Society</i> , 2012, 61, 2005-2010.	0.7	3
83	Sequential structural and optical evolution of MoS ₂ by chemical synthesis and exfoliation. <i>Journal of the Korean Physical Society</i> , 2015, 66, 1852-1855.	0.7	3
84	Blue-shifted and strongly-enhanced light emission in transition-metal dichalcogenide twisted heterobilayers. <i>Npj 2D Materials and Applications</i> , 2022, 6, .	7.9	3
85	Photoactive Deoxyribonucleic Acid (DNA) Bearing Carbazole Moieties and Its Photoluminescence Behavior With Ir(III) Complex. <i>Molecular Crystals and Liquid Crystals</i> , 2010, 519, 227-233.	0.9	2
86	Graphene synthesis from graphite/Ni composite films grown by sputtering. <i>Journal of the Korean Physical Society</i> , 2012, 61, 563-567.	0.7	2
87	High-performance Core/Shell InGaN/GaN Radial Multi-quantum-well Nanowire Solar Cells Non-catalytically Grown on Si Wafers. <i>Journal of the Korean Physical Society</i> , 2018, 73, 912-916.	0.7	2
88	Effect of Ge Concentration on the Temperature Dependence of Photoluminescence from Ge-Doped ZnO. <i>Journal of the Korean Physical Society</i> , 2008, 53, 426-430.	0.7	2
89	Effect of oxygen content on resistive switching memory characteristics of TiO _x films. <i>Journal of the Korean Physical Society</i> , 2012, 60, 791-794.	0.7	1
90	Effect of Al concentration on the structural, electrical, and optical properties of transparent Al-doped ZnO. <i>Journal of the Korean Physical Society</i> , 2012, 61, 599-602.	0.7	1

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91	Formation properties of an InGaN active layer for high-efficiency InGaN/GaN multi-quantum-well-nanowire light-emitting diodes. Journal of the Korean Physical Society, 2016, 69, 772-777.	0.7	1
92	Non-catalytic direct synthesis of graphene on Si (111) wafers by using inductively-coupled plasma chemical vapor deposition. Journal of the Korean Physical Society, 2016, 69, 536-540.	0.7	1
93	Temperature-Dependent Carrier Recombination Processes in Nanocrystalline Si/SiO ₂ Multi-Layers Studied by Time-Resolved and Time-Integrated Photoluminescence. , 2006, , .		0
94	Characterization of Pd-nanocrystal-based nonvolatile memory devices. , 2006, , .		0
95	Blue-light emission from crystalline Si/silica core/shell nanowires. , 2008, , .		0
96	Effect of doping-induced defect concentration on the characteristics of Si-quantum-dot solar cells. , 2010, , .		0
97	Effect of defects in oxide templates on Non-catalytic growth of GaN nanowires for high-efficiency light-emitting diodes. Journal of the Korean Physical Society, 2016, 68, 864-868.	0.7	0