Suk-Ho Choi

List of Publications by Year
in descending order

97 papers	2,910 citations	186265 28 h-index	182427 51 g-index
98 all docs	98 docs citations	98 times ranked	4708 citing authors

#	Article	IF	Citations
1	Growth of two-dimensional Janus MoSSe by a single in situ process without initial or follow-up treatments. NPG Asia Materials, 2022, 14, .	7.9	27
2	Possible permanent Dirac- to Weyl-semimetal phase transition by ion implantation. NPG Asia Materials, 2022, 14, .	7.9	4
3	Blue-shifted and strongly-enhanced light emission in transition-metal dichalcogenide twisted heterobilayers. Npj 2D Materials and Applications, 2022, 6, .	7.9	3
4	All-two-dimensional semitransparent and flexible photodetectors employing graphene/MoS2/graphene vertical heterostructures. Journal of Alloys and Compounds, 2021, 864, 158118.	5.5	21
5	Enhancement of efficiency and stability in organic solar cells by employing MoS2 transport layer, graphene electrode, and graphene quantum dots-added active layer. Applied Surface Science, 2021, 538, 148155.	6.1	26
6	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. Journal of Alloys and Compounds, 2021, 877, 160311.	5.5	17
7	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
8	High-speed heterojunction photodiodes made of single- or multiple-layer MoS2 directly-grown on Si quantum dots. Journal of Alloys and Compounds, 2020, 820, 153074.	5.5	14
9	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
10	Performance enhancement of graphene/porous Si solar cells by employing layer-controlled MoS2. Applied Surface Science, 2020, 532, 147460.	6.1	16
11	Self-powered and flexible perovskite photodiode/solar cell bifunctional devices with MoS2 hole transport layer. Applied Surface Science, 2020, 514, 145880.	6.1	29
12	Enhanced Flexibility and Stability in Perovskite Photodiodeâ€"Solar Cell Nanosystem Using MoS₂ Electron-Transport Layer. ACS Applied Materials & Interfaces, 2020, 12, 4586-4593.	8.0	32
13	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. ACS Sustainable Chemistry and Engineering, 2019, 7, 13178-13185.	6.7	29
14	Graphene-nanomesh transparent conductive electrode/porous-Si Schottky-junction solar cells. Journal of Alloys and Compounds, 2019, 803, 958-963.	5.5	10
15	Dimensionally Engineered Perovskite Heterostructure for Photovoltaic and Optoelectronic Applications. Advanced Energy Materials, 2019, 9, 1902470.	19.5	40
16	InAs on GaAs Photodetectors Using Thin InAlAs Graded Buffers and Their Application to Exceeding Short-Wave Infrared Imaging at 300â€‰K. Scientific Reports, 2019, 9, 12875.	3.3	10
17	Optical Sensing Properties of ZnO Nanoparticles Prepared by Spray Pyrolysis. Journal of Nanoscience and Nanotechnology, 2019, 19, 1048-1051.	0.9	7
18	High-detectivity and -stability multilayer-graphene/Si-quantum-dot photodetectors with TiOx back-surface passivation layer. Dyes and Pigments, 2019, 170, 107587.	3.7	7

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19	Highly-flexible graphene transparent conductive electrode/perovskite solar cells with graphene quantum dots-doped PCBM electron transport layer. Dyes and Pigments, 2019, 170, 107630.	3.7	28
20	High-Detectivity/-Speed Flexible and Self-Powered Graphene Quantum Dots/Perovskite Photodiodes. ACS Sustainable Chemistry and Engineering, 2019, 7, 19961-19968.	6.7	16
21	High-Performance <i>n-i-p-</i>Type Perovskite Photodetectors Employing Graphene-Transparent Conductive Electrodes N-Type Doped with Amine Group Molecules. ACS Sustainable Chemistry and Engineering, 2019, 7, 734-739.	6.7	21
22	Highly-flexible and -stable deep-ultraviolet photodiodes made of graphene quantum dots sandwiched between graphene layers. Dyes and Pigments, 2019, 163, 238-242.	3.7	21
23	Lamination-produced semi-transparent/flexible perovskite solar cells with doped-graphene anode and cathode. Journal of Alloys and Compounds, 2019, 775, 905-911.	5.5	38
24	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
25	Effect of layer number and metal-chloride dopant on multiple layers of graphene/porous Si solar cells. Journal of Applied Physics, 2018, 123, 123101.	2.5	22
26	Effect of layer number on flexible perovskite solar cells employing multiple layers of graphene as transparent conductive electrodes. Journal of Alloys and Compounds, 2018, 744, 404-411.	5.5	25
27	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
28	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
29	Graphene/Si solar cells employing triethylenetetramine dopant and polymethylmethacrylate antireflection layer. Applied Surface Science, 2018, 433, 181-187.	6.1	17
30	Strong enhancement of emission efficiency in GaN light-emitting diodes by plasmon-coupled light amplification of graphene. Nanotechnology, 2018, 29, 055201.	2.6	4
31	High-performance Core/Shell InGaN/GaN Radial Multi-quantum-well Nanowire Solar Cells Non-catalytically Grown on Si Wafers. Journal of the Korean Physical Society, 2018, 73, 912-916.	0.7	2
32	High-Quality 100 nm Thick InSb Films Grown on GaAs(001) Substrates with an In_{<i>x</i>}Al_{1â€“<i>x</i>}Sb Continuously Graded Buffer Layer. ACS Omega, 2018, 3, 14562-14566.	3.5	5
33	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
34	Recent Studies of Semitransparent Solar Cells. Coatings, 2018, 8, 329.	2.6	39
35	Self-powered Ag-nanowires-doped graphene/Si quantum dots/Si heterojunction photodetectors. Journal of Alloys and Compounds, 2018, 758, 32-37.	5.5	8
36	Use of Graphene for Solar Cells. Journal of the Korean Physical Society, 2018, 72, 1442-1453.	0.7	21

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37	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
38	Highly-flexible perovskite photodiodes employing doped multilayer-graphene transparent conductive electrodes. Nanotechnology, 2018, 29, 425203.	2.6	13
39	Graphene-Based Semiconductor Heterostructures for Photodetectors. Micromachines, 2018, 9, 350.	2.9	68
40	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
41	Graphene/porous silicon Schottky-junction solar cells. Journal of Alloys and Compounds, 2017, 715, 291-296.	5.5	53
42	Graphene-based vertical-junction diodes and applications. Journal of the Korean Physical Society, 2017, 71, 311-318.	0.7	17
43	Enhancement of efficiency in graphene/porous silicon solar cells by co-doping graphene with gold nanoparticles and bis(trifluoromethanesulfonyl)-amide. Journal of Materials Chemistry C, 2017, 5, 9005-9011.	5.5	32
44	Highly-stable and -flexible graphene/(CF3SO2)2NH/graphene transparent conductive electrodes for organic solar cells. Nanotechnology, 2017, 28, 425203.	2.6	10
45	Enhancement of efficiency and long-term stability in graphene/Si-quantum-dot heterojunction photodetectors by employing bis(trifluoromethanesulfonyl)-amide as a dopant for graphene. Journal of Materials Chemistry C, 2017, 5, 12737-12743.	5.5	20
46	Successful Fabrication of <scp>GaN</scp> Epitaxial Layer on Nonâ€Catalyticallyâ€grown Graphene. Bulletin of the Korean Chemical Society, 2016, 37, 1004-1009.	1.9	4
47	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
48	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
49	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
50	Light-induced negative differential resistance in graphene/Si-quantum-dot tunneling diodes. Scientific Reports, 2016, 6, 30669.	3.3	19
51	Energy transfer from an individual silica nanoparticle to graphene quantum dots and resulting enhancement of photodetector responsivity. Scientific Reports, 2016, 6, 27145.	3.3	32
52	Precise and selective sensing of DNA-DNA hybridization by graphene/Si-nanowires diode-type biosensors. Scientific Reports, 2016, 6, 31984.	3.3	19
53	Anisotropic Terahertz Emission from Bi2Se3 Thin Films with Inclined Crystal Planes. Nanoscale Research Letters, 2015, 10, 489.	5.7	10
54	Sequential structural and optical evolution of MoS2 by chemical synthesis and exfoliation. Journal of the Korean Physical Society, 2015, 66, 1852-1855.	0.7	3

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55	Graphene/Siâ€Quantumâ€Dot Heterojunction Diodes Showing High Photosensitivity Compatible with Quantum Confinement Effect. Advanced Materials, 2015, 27, 2614-2620.	21.0	56
56	Graphene-Assisted Chemical Etching of Silicon Using Anodic Aluminum Oxides as Patterning Templates. ACS Applied Materials & Interfaces, 2015, 7, 24242-24246.	8.0	30
57	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
58	Degradation reduction and stability enhancement of p-type graphene by RhCl3 doping. Journal of Alloys and Compounds, 2015, 621, 1-6.	5.5	25
59	Near-Ultraviolet-Sensitive Graphene/Porous Silicon Photodetectors. ACS Applied Materials & Interfaces, 2014, 6, 20880-20886.	8.0	84
60	Enhancement of the effectiveness of graphene as a transparent conductive electrode by AgNO₃doping. Nanotechnology, 2014, 25, 125701.	2.6	23
61	High photoresponsivity in an all-graphene pâ€“n vertical junction photodetector. Nature Communications, 2014, 5, 3249.	12.8	161
62	Formation of threeâ€dimensional GaAs microstructures by combination of wet and metalâ€assisted chemical etching. Physica Status Solidi - Rapid Research Letters, 2014, 8, 345-348.	2.4	9
63	In-situ monitoring of AuCl3-doping and -dedoping behaviors in graphene. Journal of the Korean Physical Society, 2014, 64, 1327-1330.	0.7	4
64	High-performance graphene-quantum-dot photodetectors. Scientific Reports, 2014, 4, 5603.	3.3	123
65	Graphene/Si-nanowire heterostructure molecular sensors. Scientific Reports, 2014, 4, 5384.	3.3	47
66	Rapid-thermal-annealing surface treatment for restoring the intrinsic properties of graphene field-effect transistors. Nanotechnology, 2013, 24, 405301.	2.6	56
67	Size-dependence of Raman scattering from graphene quantum dots: Interplay between shape and thickness. Applied Physics Letters, 2013, 102, .	3.3	63
68	Graphene pâ€“n Vertical Tunneling Diodes. ACS Nano, 2013, 7, 5168-5174.	14.6	61
69	Size-dependent radiative decay processes in graphene quantum dots. Applied Physics Letters, 2012, 101, .	3.3	27
70	Graded-size Si-nanocrystal-multilayer solar cells. Journal of Applied Physics, 2012, 112, .	2.5	8
71	Effect of Ga doping concentration on the luminescence efficiency of GaN light-emitting diodes with Ga-doped ZnO contacts. Applied Physics B: Lasers and Optics, 2012, 109, 283-287.	2.2	6
72	Anomalous Behaviors of Visible Luminescence from Graphene Quantum Dots: Interplay between Size and Shape. ACS Nano, 2012, 6, 8203-8208.	14.6	563

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73	Photovoltaic and luminescence properties of Sb- and P-doped Si quantum dots. Journal of the Korean Physical Society, 2012, 60, 1616-1619.	0.7	4
74	Effect of oxygen content on resistive switching memory characteristics of TiO x films. Journal of the Korean Physical Society, 2012, 60, 791-794.	0.7	1
75	Optical study of bulk and thin-film tin dioxide. Journal of the Korean Physical Society, 2012, 61, 2005-2010.	0.7	3
76	Graphene synthesis from graphite/Ni composite films grown by sputtering. Journal of the Korean Physical Society, 2012, 61, 563-567.	0.7	2
77	Effect of Al concentration on the structural, electrical, and optical properties of transparent Al-doped ZnO. Journal of the Korean Physical Society, 2012, 61, 599-602.	0.7	1
78	Microstructure, optical property, and electronic band structure of cuprous oxide thin films. Journal of Applied Physics, 2011, 110, .	2.5	45
79	Effect of (O, As) dual implantation on p-type doping of ZnO films. Journal of Applied Physics, 2011, 110, 103708.	2.5	9
80	Effect of doping-induced defect concentration on the characteristics of Si-quantum-dot solar cells. , 2010, , .		0
81	Nonvolatile memories by using charge traps in silicon-rich oxides. Journal of Applied Physics, 2010, 108, 033708.	2.5	8
82	Doping- and size-dependent photovoltaic properties of p-type Si-quantum-dot heterojunction solar cells: correlation with photoluminescence. Applied Physics Letters, 2010, 97, 072108.	3.3	34
83	Plasmon-Enhanced Ultraviolet Photoluminescence from Hybrid Structures of Graphene/ZnO Films. Physical Review Letters, 2010, 105, 127403.	7.8	127
84	Photoactive Deoxyribonucleic Acid (DNA) Bearing Carbazole Moieties and Its Photoluminescence Behavior With Ir(III) Complex. Molecular Crystals and Liquid Crystals, 2010, 519, 227-233.	0.9	2
85	Nonvolatile memories using deep traps formed in Al2O3 by metal ion implantation. Applied Physics Letters, 2009, 94, 112110.	3.3	11
86	Formation characteristics and photoluminescence of Ge nanocrystals in HfO2. Journal of Applied Physics, 2009, 105, .	2.5	11
87	Enhanced ultraviolet emission from hybrid structures of single-walled carbon nanotubes/ZnO films. Applied Physics Letters, 2009, 94, 213113.	3.3	32
88	Nonvolatile-Memory Characteristics of $hbox{AlO}^{-}$ -Implanted $hbox{Al}_{2}hbox{O}_{3}$. IEEE Electron Device Letters, 2009, 30, 837-839.	3.9	50
89	High-efficient ultraviolet emission in phonon-reduced ZnO films: The role of germanium. Journal of Applied Physics, 2008, 103, .	2.5	12
90	Blue-light emission from crystalline Si/silica core/shell nanowires. , 2008, , .		0

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91	Nonvolatile memories of Ge nanodots self-assembled by depositing ultrasmall amount Ge on SiO2 at room temperature. Applied Physics Letters, 2008, 92, 093124.	3.3	11
92	Optical properties of thermally annealed hafnium oxide and their correlation with structural change. Journal of Applied Physics, 2008, 104, .	2.5	48
93	Effect of Ge Concentration on the Temperature Dependence of Photoluminescence from Ge-Doped ZnO. Journal of the Korean Physical Society, 2008, 53, 426-430.	0.7	2
94	Enhancement of Memory Performance Using Doubly Stacked Si-Nanocrystal Floating Gates Prepared by Ion Beam Sputtering in UHV. IEEE Transactions on Electron Devices, 2007, 54, 359-362.	3.0	28
95	Temperature-Dependent Carrier Recombination Processes in Nanocrystalline Si/SiO2 Multi-Layers Studied by Time-Resolved and Time-Integrated Photoluminescence. , 2006, , .		0
96	Characterization of Pd-nanocrystal-based nonvolatile memory devices. , 2006, , .		0
97	High trap density and long retention time from self-assembled amorphous Si nanocluster floating gate nonvolatile memory. Applied Physics Letters, 2006, 89, 243513.	3.3	6