Jung-Hun Seo

List of Publications by Year in Descending Order

101 papers	2,828 citations	27 h-index	50 g-index
134 ext. papers	3,320 ext. citations	5.6 avg, IF	5.06 L-index

#	Paper	IF	Citations
101	Bilayer metal etch mask strategy for deep diamond etching. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2022**, 40, 022210	1.3	
100	Theoretical Prediction of Heterogeneous Integration of Dissimilar Semiconductor with Various Ultra-Thin Oxides and 2D Materials. *Electronic Materials*, **2021**, 2, 495-503	0.8	1
99	High Performance Flexible Visible-Blind Ultraviolet Photodetectors with Two-Dimensional Electron Gas Based on Unconventional Release Strategy. *ACS Nano*, **2021**, 15, 8386-8396	16.7	13
98	High-Performance Solar Blind UV Photodetectors Based on Single-Crystal Si/β-Ga2O3 p-n Heterojunction. *Advanced Materials Technologies*, **2021**, 6, 2100254	6.8	5
97	Chalcogenide perovskite BaZrS3 thin-film electronic and optoelectronic devices by low temperature processing. *Nano Energy*, **2021**, 85, 105959	17.1	13
96	Investigation of Nano-Gaps in Fractured β-Ga2O3 Nanomembranes Formed by Uniaxial Strain. *Advanced Electronic Materials*, **2021**, 7, 2000763	6.4	2
95	Investigation of Thermal Properties of β-Ga2O3 Nanomembranes on Diamond Heterostructure Using Raman Thermometry. *ECS Journal of Solid State Science and Technology*, **2020**, 9, 055007	2	14
94	Low dimensional freestanding semiconductors for flexible optoelectronics: materials, synthesis, process, and applications. *Materials Research Letters*, **2020**, 8, 123-144	7.4	22
93	Flexible CMOS chip converted by a novel chip transformation process. *Electronics Letters*, **2020**, 56, 1335-1337	1	
92	Fabrication of AlGaAs/GaAs/diamond heterojunctions for diamond-collector HBTs. *AIP Advances*, **2020**, 10, 125226	1.5	5
91	A simplified method of measuring thermal conductivity of β-Ga2O3 nanomembrane. *Nano Express*, **2020**, 1, 030010	2	4
90	Flexible crystalline β-Ga2O3 solar-blind photodetectors. *Journal of Materials Chemistry C*, **2020**, 8, 14732-14739	7.1	14
89	Flexible β-Ga2O3 Nanomembrane Schottky Barrier Diodes. *Advanced Electronic Materials*, **2019**, 5, 1800714	6.4	31
88	P-type silicon as hole supplier for nitride-based UVC LEDs. *New Journal of Physics*, **2019**, 21, 023011	2.9	9
87	Direct Observation of Raman Spectra in Black Phosphorus under Uniaxial Strain Conditions. *Nanomaterials*, **2019**, 9,	5.4	14
86	Direct Growth of Two Dimensional Molybdenum Disulfide on Flexible Ceramic Substrate. *Nanomaterials*, **2019**, 9,	5.4	5
85	Recent Progress in Gallium Oxide and Diamond Based High Power and High-Frequency Electronics. *International Journal of High Speed Electronics and Systems*, **2019**, 28, 1940004	0.5	6

84	229 nm UV LEDs on aluminum nitride single crystal substrates using p-type silicon for increased hole injection. *Applied Physics Letters*, **2018**, 112, 081101	3.4	33
83	Detecting the Oxidation of Zircaloy Claddings by Infrared Interference. *Nano*, **2018**, 13, 1850015	1.1	2
82	Flexible and Transparent Organic Phototransistors on Biodegradable Cellulose Nanofibrillated Fiber Substrates. *Advanced Optical Materials*, **2018**, 6, 1701140	8.1	28
81	Fabrication of Ge-on-insulator wafers by Smart-CutTMwith thermal management for undamaged donor Ge wafers. *Semiconductor Science and Technology*, **2018**, 33, 015017	1.8	6
80	226 nm AlGaN/AlN UV LEDs using p-type Si for hole injection and UV reflection. *Applied Physics Letters*, **2018**, 113, 011111	3.4	40
79	Prediction of optical band gap of □(Al x Ga 1-x) 2 O 3 using material informatics. *Materials Discovery*, **2018**, 11, 1-5		12
78	On the integration of ultrananocrystalline diamond (UNCD) with CMOS chip. *AIP Advances*, **2017**, 7, 035121	1.5	4
77	Transferrable single crystalline 4H-SiC nanomembranes. *Journal of Materials Chemistry C*, **2017**, 5, 264-268	7.1	26
76	Recent advances in free-standing single crystalline wide band-gap semiconductors and their applications: GaN, SiC, ZnO, □Ga2O3, and diamond. *Journal of Materials Chemistry C*, **2017**, 5, 8338-8354	7.1	117
75	Radio-frequency flexible and stretchable electronics: the need, challenges and opportunities **2017**,		4
74	Bendable MOS capacitors formed with printed In0.2Ga0.8As/GaAs/In0.2Ga0.8As trilayer nanomembrane on plastic substrates. *Applied Physics Letters*, **2017**, 110, 133505	3.4	1
73	High-performance flexible BiCMOS electronics based on single-crystal Si nanomembrane. *Npj Flexible Electronics*, **2017**, 1,	10.7	25
72	Epitaxial VO2thin-film-based radio-frequency switches with electrical activation. *Applied Physics Express*, **2017**, 10, 091101	2.4	3
71	Epitaxial VO2 thin film-based radio-frequency switches with thermal activation. *Applied Physics Letters*, **2017**, 111, 063110	3.4	14
70	Origami silicon optoelectronics for hemispherical electronic eye systems. *Nature Communications*, **2017**, 8, 1782	17.4	119
69	Triaxial compressive strain in bilayer graphene enabled by nitride stressor layer. *Extreme Mechanics Letters*, **2017**, 11, 77-83	3.9	4
68	High-Speed, Flexible Electronics by Use of Si Nanomembranes **2016**, 113-142		1
67	Semiconductor Nanomembranes for Fano Resonance Photonic Crystal Devices **2016**, 271-304		1

66	Fast Flexible Transistors with a Nanotrench Structure. *Scientific Reports*, **2016**, 6, 24771	4.9	25
65	Characterizations of biodegradable epoxy-coated cellulose nanofibrils (CNF) thin film for flexible microwave applications. *Cellulose*, **2016**, 23, 1989-1995	5.5	11
64	Nanometre-thick single-crystalline nanosheets grown at the water-air interface. *Nature Communications*, **2016**, 7, 10444	17.4	100
63	Microwave TFTs Made of MOCVD ZnO With ALD Al2O3 Gate Dielectric. *IEEE Journal of the Electron Devices Society*, **2016**, 4, 55-59	2.3	2
62	Quantitative modeling of betavoltaic microbattery performance. *Sensors and Actuators A: Physical*, **2016**, 240, 131-137	3.9	13
61	Capacitance-voltage characteristics of Si and Ge nanomembrane based flexible metal-oxide-semiconductor devices under bending conditions. *Applied Physics Letters*, **2016**, 108, 233505	3.4	12
60	Amorphous Si/SiO2 distributed Bragg reflectors with transfer printed single-crystalline Si nanomembranes. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2016**, 34, 040601	1.3	8
59	Flexible germanium nanomembrane metal-semiconductor-metal photodiodes. *Applied Physics Letters*, **2016**, 109, 051105	3.4	22
58	Resonant cavity germanium photodetector via stacked single-crystalline nanomembranes. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2016**, 34, 040604	1.3	7
57	Wrinkled bilayer graphene with wafer scale mechanical strain. *Applied Physics Letters*, **2016**, 108, 183101	3.4	4
56	Thermal diffusion boron doping of single-crystal natural diamond. *Journal of Applied Physics*, **2016**, 119, 205703	2.5	22
55	Fast flexible thin-film transistors with deep submicron channel enabled by nanoimprint lithography **2016**,		1
54	Light absorption enhancement in Ge nanomembrane and its optoelectronic application. *Optics Express*, **2016**, 24, 16894-903	3.3	16
53	Flexible Phototransistors Based on Single-Crystalline Silicon Nanomembranes. *Advanced Optical Materials*, **2016**, 4, 120-125	8.1	65
52	A Simplified Method of Making Flexible Blue LEDs on a Plastic Substrate. *IEEE Photonics Journal*, **2015**, 7, 1-7	1.8	30
51	Ultra-thin distributed Bragg reflectors via stacked single-crystal silicon nanomembranes. *Applied Physics Letters*, **2015**, 106, 181107	3.4	14
50	Tunable biaxial in-plane compressive strain in a Si nanomembrane transferred on a polyimide film. *Applied Physics Letters*, **2015**, 106, 212107	3.4	12
49	Athermal Photonic Crystal Membrane Reflectors on Diamond. *IEEE Photonics Technology Letters*, **2015**, 27, 1072-1075	2.2	3

48	Biodegradable Thin Metal Foils and Spin-On Glass Materials for Transient Electronics. *Advanced Functional Materials*, **2015**, 25, 1789-1797	15.6	101
47	Microwave flexible transistors on cellulose nanofibrillated fiber substrates. *Applied Physics Letters*, **2015**, 106, 262101	3.4	51
46	On the bending characterization of flexible radio-frequency single-crystalline germanium diodes on a plastic substrate. *Applied Physics Letters*, **2015**, 106, 043504	3.4	8
45	Transient Eletronics: Biodegradable Thin Metal Foils and Spin-On Glass Materials for Transient Electronics (Adv. Funct. Mater. 12/2015). *Advanced Functional Materials*, **2015**, 25, 1904-1904	15.6	
44	Creating periodic local strain in monolayer graphene with nanopillars patterned by self-assembled block copolymer. *Applied Physics Letters*, **2015**, 107, 143107	3.4	13
43	Transfer Printed Nanomembranes for Heterogeneously Integrated Membrane Photonics. *Photonics* , **2015**, 2, 1081-1100	2.2	10
42	Polycrystalline GeSn thin films on Si formed by alloy evaporation. *Applied Physics Express*, **2015**, 8, 061301	2.4	12
41	Radio-frequency flexible transistors on cellulose nanofibrillated fiber (CNF) substrates **2015**,		1
40	Nanopatterning by laser interference lithography: applications to optical devices. *Journal of Nanoscience and Nanotechnology*, **2014**, 14, 1521-32	1.3	88
39	Highly stretchable carbon nanotube transistors with ion gel gate dielectrics. *Nano Letters*, **2014**, 14, 682-6	11.5	133
38	Cl-doped ZnO nanowires with metallic conductivity and their application for high-performance photoelectrochemical electrodes. *ACS Applied Materials & Interfaces*, **2014**, 6, 1288-93	9.5	69
37	Progress in 2D photonic crystal Fano resonance photonics. *Progress in Quantum Electronics*, **2014**, 38, 1-74	9.1	165
36	Flexible radio-frequency single-crystal germanium switch on plastic substrates. *Applied Physics Letters*, **2014**, 104, 163501	3.4	12
35	Design and Characterization of Photonic Crystal Membrane Reflector Based Vertical Cavity Surface Emitting Lasers on Silicon. *Reviews in Nanoscience and Nanotechnology*, **2014**, 3, 77-87		2
34	Investigation of various mechanical bending strains on characteristics of flexible monocrystalline silicon nanomembrane diodes on a plastic substrate. *Microelectronic Engineering*, **2013**, 110, 40-43	2.5	14
33	Fast flexible electronics with strained silicon nanomembranes. *Scientific Reports*, **2013**, 3, 1291	4.9	86
32	Fabrication and Characterization of Flexible Microwave Single-Crystal Germanium Nanomembrane Diodes on a Plastic Substrate. *IEEE Electron Device Letters*, **2013**, 34, 160-162	4.4	21
31	RF Characterization of Gigahertz Flexible Silicon Thin-Film Transistor on Plastic Substrates Under Bending Conditions. *IEEE Electron Device Letters*, **2013**, 34, 262-264	4.4	32

30	Materials for bioresorbable radio frequency electronics. *Advanced Materials*, **2013**, 25, 3526-31	24	154
29	Coupled double-layer Fano resonance photonic crystal filters with lattice-displacement. *Applied Physics Letters*, **2013**, 103, 241106	3.4	43
28	Graphene RF transistors with buried bottom gate **2013**,		2
27	Large-Area Printed Broadband Membrane Reflectors by Laser Interference Lithography. *IEEE Photonics Journal*, **2013**, 5, 2200106-2200106	1.8	25
26	Double-layer Fano resonance photonic crystal filters. *Optics Express*, **2013**, 21, 24582-9	3.3	53
25	A Multifunction Heterojunction Formed Between Pentacene and a Single-Crystal Silicon Nanomembrane. *Advanced Functional Materials*, **2013**, 23, 3398-3403	15.6	20
24	Semiconductor nanomembranes for integrated silicon photonics and flexible Photonics. *Optical and Quantum Electronics*, **2012**, 44, 605-611	2.4	12
23	Stable p-type conduction from Sb-decorated head-to-head basal plane inversion domain boundaries in ZnO nanowires. *Nano Letters*, **2012**, 12, 1311-6	11.5	57
22	Substrate-free self-assembly approach toward large-area nanomembranes. *ACS Nano*, **2012**, 6, 2602-9	16.7	35
21	Design of Photonic Crystal Membrane-Reflector-Based VCSELs. *IEEE Photonics Journal*, **2012**, 4, 2169-2175	2.8	15
20	Broadband Membrane Reflectors on Glass. *IEEE Photonics Technology Letters*, **2012**, 24, 476-478	2.2	18
19	Fast flexible electronics using transferrable silicon nanomembranes. *Journal Physics D: Applied Physics*, **2012**, 45, 143001	3	61
18	Transfer-printed stacked nanomembrane lasers on silicon. *Nature Photonics*, **2012**, 6, 615-620	33.9	147
17	An aqueous solution-based doping strategy for large-scale synthesis of Sb-doped ZnO nanowires. *Nanotechnology*, **2011**, 22, 225602	3.4	50
16	Interface engineering by piezoelectric potential in ZnO-based photoelectrochemical anode. *Nano Letters*, **2011**, 11, 5587-93	11.5	108
15	Experimental characterization and modeling of the bending strain effect on flexible microwave diodes and switches on plastic substrate. *Applied Physics Letters*, **2011**, 99, 243104	3.4	18
14	Fast Flexible Electronics Based on Printable Thin Mono-Crystalline Silicon. *ECS Transactions*, **2011**, 34, 137-142	1	10
13	Semiconductor nanomembranes for integrated and flexible photonics **2011**,		1

12	Transferrable single-crystal silicon nanomembranes and their application to flexible microwave systems. *Journal of Information Display*, **2011**, 12, 109-113	4.1	3
11	Cryogenic operation of a 24 GHz MMIC SiGe HBT medium power amplifier. *Semiconductor Science and Technology*, **2010**, 25, 125002	1.8	5
10	12-GHz thin-film transistors on transferrable silicon nanomembranes for high-performance flexible electronics. *Small*, **2010**, 6, 2553-7	11	118
9	A zinc-oxide thin-film transistor using a spun-on dielectric and gate electrode. *Journal Physics D: Applied Physics*, **2009**, 42, 065105	3	10
8	A 6,13-bis(Triisopropylsilylethynyl) Pentacene Thin-Film Transistor Using a Spun-On Inorganic Gate-Dielectric. *IEEE Transactions on Electron Devices*, **2008**, 55, 500-505	2.9	26
7	Effect of modifying a methyl siloxane-based dielectric by a polymer thin film for pentacene thin-film transistors. *Applied Surface Science*, **2008**, 254, 6987-6990	6.7	8
6	p-type semiconducting □dihexylsexithiophene for an organic thin film transistor. *Journal of Applied Physics*, **2007**, 101, 064502	2.5	19
5	Releasable AlGaN/GaN 2D Electron Gas Heterostructure Membranes for Flexible Wide-Bandgap Electronics. *Advanced Electronic Materials*,2100652	6.4	2
4	Electroforming-Free HfO2:CeO2 Vertically Aligned Nanocomposite Memristors with Anisotropic Dielectric Response. *ACS Applied Electronic Materials*,	4	4
3	Large-size free-standing single-crystal □Ga2O3 membranes fabricated by hydrogen implantation and lift-off. *Journal of Materials Chemistry C*,	7.1	7
2	Influences of Native Oxide on the Properties of Ultrathin Al 2 O 3 -Interfaced Si/GaAs Heterojunctions. *Advanced Materials Interfaces*,2101531	4.6	2
1	Distinct UV□Visible Responsivity Enhancement of GaAs Photodetectors via Monolithic Integration of Antireflective Nanopillar Structure and UV Absorbing IGZO Layer. *Advanced Optical Materials*,2200062	8.1	2