

Eui-Hyeok Yang

List of Publications by Year in descending order

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135
papers

2,504
citations

172386

29
h-index

233338

45
g-index

138
all docs

138
docs citations

138
times ranked

3899
citing authors

#	ARTICLE	IF	CITATIONS
1	Out-of-plane growth of CNTs on graphene for supercapacitor applications. <i>Nanotechnology</i> , 2012, 23, 015301.	1.3	140
2	The influence of thermal annealing to remove polymeric residue on the electronic doping and morphological characteristics of graphene. <i>Carbon</i> , 2013, 65, 35-45.	5.4	118
3	Enabling room temperature ferromagnetism in monolayer MoS ₂ via in situ iron-doping. <i>Nature Communications</i> , 2020, 11, 2034.	5.8	112
4	Strain Engineering and Raman Spectroscopy of Monolayer Transition Metal Dichalcogenides. <i>Chemistry of Materials</i> , 2018, 30, 5148-5155.	3.2	92
5	Influence of the substrate material on the optical properties of tungsten diselenide monolayers. <i>2D Materials</i> , 2017, 4, 025045.	2.0	80
6	The growth scale and kinetics of WS ₂ monolayers under varying H ₂ concentration. <i>Scientific Reports</i> , 2015, 5, 13205.	1.6	79
7	Hierarchical magnetic assembly of nanowires. <i>Nanotechnology</i> , 2007, 18, 205305.	1.3	77
8	A Nanochannel Fabrication Technique without Nanolithography. <i>Nano Letters</i> , 2003, 3, 1339-1340.	4.5	75
9	Leak-Tight Piezoelectric Microvalve for High-Pressure Gas Micropropulsion. <i>Journal of Microelectromechanical Systems</i> , 2004, 13, 799-807.	1.7	69
10	Improved photoresponse with enhanced photoelectric contribution in fully suspended graphene photodetectors. <i>Scientific Reports</i> , 2013, 3, 2791.	1.6	68
11	An experimental study on ferromagnetic nickel nanowires functionalized with antibodies for cell separation. <i>Nanotechnology</i> , 2010, 21, 105107.	1.3	63
12	Highly Stretchable Supercapacitors Enabled by Interwoven CNTs Partially Embedded in PDMS. <i>ACS Applied Energy Materials</i> , 2018, 1, 2048-2055.	2.5	57
13	A Study on Field Emission Characteristics of Planar Graphene Layers Obtained from a Highly Oriented Pyrolyzed Graphite Block. <i>Nanoscale Research Letters</i> , 2009, 4, 1218-1221.	3.1	55
14	THz applications of 2D materials: Graphene and beyond. <i>Nano Structures Nano Objects</i> , 2018, 15, 107-113.	1.9	51
15	Localized States and Resultant Band Bending in Graphene Antidot Superlattices. <i>Nano Letters</i> , 2011, 11, 1254-1258.	4.5	48
16	Graphene-Assisted Antioxidation of Tungsten Disulfide Monolayers: Substrate and Electric Field Effect. <i>Advanced Materials</i> , 2017, 29, 1603898.	11.1	47
17	Piezoelectric Unimorph Microactuator Arrays for Single-Crystal Silicon Continuous-Membrane Deformable Mirror. <i>Journal of Microelectromechanical Systems</i> , 2006, 15, 370-379.	1.7	45
18	Determination of edge purity in bilayer graphene using $\frac{1}{4}$ -Raman spectroscopy. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	45

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19	Optical Control of Edge Chirality in Graphene. Nano Letters, 2011, 11, 4874-4878.	4.5	45
20	Flexible Graphene, Graphene Oxide, and Carbon Nanotube-Based Supercapacitors and Batteries. Annalen Der Physik, 2019, 531, 1800507.	0.9	44
21	Tunable Wetting Mechanism of Polypyrrole Surfaces and Low-Voltage Droplet Manipulation via Redox. Langmuir, 2011, 27, 4249-4256.	1.6	42
22	Evaporative self-assembly of nanowires on superhydrophobic surfaces of nanotip latching structures. Applied Physics Letters, 2011, 98, .	1.5	42
23	AN OVERVIEW OF MEMS-BASED MICROPROPULSION DEVELOPMENTS AT JPL. Acta Astronautica, 2003, 52, 881-895.	1.7	41
24	Location-specific growth and transfer of arrayed MoS ₂ monolayers with controllable size. 2D Materials, 2017, 4, 025093.	2.0	40
25	Chemical Vapor Deposition of Carbon Nanotubes on Monolayer Graphene Substrates: Reduced Etching via Suppressed Catalytic Hydrogenation Using C ₂ H ₄ . Chemistry of Materials, 2013, 25, 3874-3879.	3.2	37
26	Thin-Film Piezoelectric Unimorph Actuator-Based Deformable Mirror With a Transferred Silicon Membrane. Journal of Microelectromechanical Systems, 2006, 15, 1214-1225.	1.7	33
27	Experimental and Computational Investigation of Layer-Dependent Thermal Conductivities and Interfacial Thermal Conductance of One- to Three-Layer WSe ₂ . ACS Applied Materials & Interfaces, 2021, 13, 13063-13071.	4.0	33
28	A normally latched, large-stroke, inchworm microactuator. Journal of Micromechanics and Microengineering, 2007, 17, 1715-1720.	1.5	31
29	Lateral actuation of an organic droplet on conjugated polymer electrodes via imbalanced interfacial tensions. Soft Matter, 2016, 12, 6902-6909.	1.2	31
30	Fabrication, Characterization, and Computational Modeling of a Piezoelectrically Actuated Microvalve for Liquid Flow Control. Journal of Microelectromechanical Systems, 2006, 15, 686-696.	1.7	30
31	Graphene vertically aligned carbon nanotube hybrid on PDMS as stretchable electrodes. Nanotechnology, 2017, 28, 465302.	1.3	30
32	Transfer patterning of large-area graphene nanomesh via holographic lithography and plasma etching. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2014, 32, .	0.6	28
33	Spin-Layer and Spin-Valley Locking in CVD-Grown AA'- and AB-Stacked Tungsten-Disulfide Bilayers. Journal of Physical Chemistry C, 2019, 123, 21813-21821.	1.5	27
34	Nanotexturing of Conjugated Polymers via One-Step Maskless Oxygen Plasma Etching for Enhanced Tunable Wettability. Langmuir, 2017, 33, 6885-6894.	1.6	26
35	Increased monolayer domain size and patterned growth of tungsten disulfide through controlling surface energy of substrates. Journal Physics D: Applied Physics, 2016, 49, 325304.	1.3	24
36	A technique for quantitative determination of the profile of the residual stress along the depth of p+ silicon films. Applied Physics Letters, 1995, 67, 912-914.	1.5	23

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37	Microactuated self-assembling of 3D polysilicon structures with reshaping technology. , 0, , .		22
38	A wafer-scale membrane transfer process for the fabrication of optical quality, large continuous membranes. Journal of Microelectromechanical Systems, 2003, 12, 804-815.	1.7	22
39	Fabrication and testing of a pair of passive bivalvular microvalves composed of p+ silicon diaphragms. Sensors and Actuators A: Physical, 1996, 57, 75-78.	2.0	21
40	A multi-walled carbon nanotubeâ€“aluminum bimorph nanoactuator. Nanotechnology, 2009, 20, 095502.	1.3	20
41	Effects of etchants in the transfer of chemical vapor deposited graphene. Journal of Applied Physics, 2018, 123, .	1.1	19
42	Controlled edge dependent stacking of WS ₂ -WS ₂ Homo- and WS ₂ -WSe ₂ Hetero-structures: A Computational Study. Scientific Reports, 2020, 10, 1648.	1.6	19
43	On-Demand Capture and Release of Organic Droplets Using Surfactant-Doped Polypyrrole Surfaces. ACS Applied Materials & Interfaces, 2017, 9, 23119-23127.	4.0	18
44	The effects of substitutional Fe-doping on magnetism in MoS ₂ and WS ₂ monolayers. Nanotechnology, 2021, 32, 095708.	1.3	18
45	The quantitative determination of the residual stress profile in oxidized p+ silicon films. Sensors and Actuators A: Physical, 1996, 54, 684-689.	2.0	17
46	In Situ Control of Underwater-Pinning of Organic Droplets on a Surfactant-Doped Conjugated Polymer Surface. ACS Applied Materials & Interfaces, 2015, 7, 25608-25617.	4.0	16
47	Influence of Transition Metal Dichalcogenide Surfaces on Cellular Morphology and Adhesion. ACS Applied Bio Materials, 2018, 1, 1448-1457.	2.3	16
48	A stretchable and bendable all-solid-state pseudocapacitor with dodecylbenzenesulfonate-doped polypyrrole-coated vertically aligned carbon nanotubes partially embedded in PDMS. Nanotechnology, 2019, 30, 095401.	1.3	16
49	A Flexible Pressure Sensor With Sandwiched Carpets of Vertically Aligned Carbon Nanotubes Partially Embedded in Polydimethylsiloxane Substrates. IEEE Sensors Journal, 2020, 20, 12146-12153.	2.4	16
50	Site-Specific Magnetic Assembly of Nanowires for Sensor Arrays Fabrication. IEEE Nanotechnology Magazine, 2008, 7, 251-255.	1.1	15
51	Self-Assembly of Nanowires at Three-Phase Contact Lines on Superhydrophobic Surfaces. Nanoscience and Nanotechnology Letters, 2010, 2, 150-156.	0.4	14
52	Effects of Electropolymerization Parameters of PPy(DBS) Surfaces on the Droplet Flattening Behaviors During Redox. Journal of Physical Chemistry B, 2016, 120, 10381-10386.	1.2	14
53	Reduction in Step Height Variation and Correcting Contrast Inversion in Dynamic AFM of WS ₂ Monolayers. Scientific Reports, 2017, 7, 17798.	1.6	14
54	The Impact of the Substrate Material on the Optical Properties of 2D WSe ₂ Monolayers. Semiconductors, 2018, 52, 565-571.	0.2	14

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55	MOEMS spatial light modulator development at the Center for Adaptive Optics. , 2003, , .		12
56	Effects of solvents and polymer on photoluminescence of transferred WS ₂ monolayers. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, .	0.6	11
57	Fabrication and dynamic testing of electrostatic actuators with p+ silicon diaphragms. Sensors and Actuators A: Physical, 1995, 50, 151-156.	2.0	10
58	Reshaping of Single-Crystal Silicon Microstructures. Japanese Journal of Applied Physics, 1999, 38, 1580-1583.	0.8	10
59	<title>Design and fabrication of MEMS-based micropropulsion devices at JPL</title>. , 2001, , .		9
60	Low-voltage manipulation of an aqueous droplet in a microchannel via tunable wetting on PPy(DBS). Lab on A Chip, 2013, 13, 302-309.	3.1	9
61	Direct transfer of corrugated graphene sheets as stretchable electrodes. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, .	0.6	9
62	Fabrication and electrochemical characterization of super-capacitor based on three-dimensional composite structure of graphene and a vertical array of carbon nanotubes. Journal of Composite Materials, 2018, 52, 3039-3044.	1.2	9
63	A carbon nanotube-embedded conjugated polymer mesh with controlled oil absorption and surface regeneration via in situ wettability switch. Journal of Colloid and Interface Science, 2018, 532, 790-797.	5.0	9
64	Computational study of the water-driven graphene wrinkle life-cycle towards applications in flexible electronics. Scientific Reports, 2020, 10, 11315.	1.6	9
65	Aperiodic conductivity oscillations in quasiballistic graphene heterojunctions. Applied Physics Letters, 2010, 97, 122106.	1.5	8
66	A Study on Carbon-Nanotube Local Oxidation Lithography Using an Atomic Force Microscope. IEEE Nanotechnology Magazine, 2011, 10, 849-854.	1.1	8
67	On the growth mode of two-lobed curvilinear graphene domains at atmospheric pressure. Scientific Reports, 2013, 3, 2571.	1.6	8
68	A Systematic Study of Graphite Local Oxidation Lithography Parameters Using an Atomic Force Microscope. Nanoscience and Nanotechnology Letters, 2010, 2, 185-188.	0.4	8
69	Step-edge calibration of torsional sensitivity for lateral force microscopy. Measurement Science and Technology, 2009, 20, 115104.	1.4	7
70	Au-on-Ag nanostructure for in-situ SERS monitoring of catalytic reactions. Nanotechnology, 2022, 33, 155701.	1.3	7
71	Improving the Optical Quality of MoSe ₂ and WS ₂ Monolayers with Complete h-BN Encapsulation by High-Temperature Annealing. ACS Applied Materials & Interfaces, 2022, 14, 2255-2262.	4.0	7
72	New technologies for the actuation and control of large aperture lightweight optical quality mirrors. , 0, , .		6

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73	Synthesis of transition metal dichalcogenides. , 2020, , 247-264.		6
74	A new wafer-level membrane transfer technique for MEMS deformable mirrors. , 0, , .		5
75	Concept, modeling, and fabrication techniques for large-stroke piezoelectric unimorph deformable mirrors. , 2003, 4983, 271.		5
76	Design and fabrication of a large vertical travel silicon inchworm microactuator for the Advanced Segmented Silicon Space Telescope. , 2003, 4981, 107.		5
77	Zero-Power Latching, Large-Stroke, High-Precision Linear Microactuator for Lightweight Structures in Space. , 0, , .		5
78	Determination of Mechanical Properties and Actuation Behaviors of Polypyrroleâ€“Copper Bimorph Nanoactuators. IEEE Nanotechnology Magazine, 2011, 10, 985-990.	1.1	5
79	Radiative pattern of intralayer and interlayer excitons in two-dimensional WS ₂ /WSe ₂ heterostructure. Scientific Reports, 2022, 12, 6939.	1.6	5
80	Fabrication and electrostatic actuation of thin diaphragms. Journal of Mechanical Science and Technology, 1998, 12, 161-169.	0.4	4
81	Determination of the modification of Young's modulus due to Joule heating of polysilicon microstructures using U-shaped beams. Sensors and Actuators A: Physical, 1998, 70, 185-190.	2.0	4
82	A Piezoelectric Microvalve for Micropropulsion. , 2002, , .		4
83	Modeling of frictional gas flow effects in a piezoelectrically actuated low leak-rate microvalve under high-pressure conditions. Journal of Micromechanics and Microengineering, 2006, 16, 2771-2782.	1.5	4
84	Engineered carbon nanotubes and graphene for nano-electronics and nanomechanics. , 2010, , .		4
85	Stabilization of Chemical-Vapor-Deposition-Grown WS ₂ Monolayers at Elevated Temperature with Hexagonal Boron Nitride Encapsulation. ACS Applied Materials & Interfaces, 2021, 13, 31271-31278.	4.0	4
86	Optimized Design, Fabrication and Characterization of PZT Unimorph Microactuators for Deformable Mirrors. , 2004, , .		4
87	Electrochemical Characterization of Tin Quantum Dots Grown on a Carbon Nanotube Mat as an Anode of Batteries for Medical Applications. Nanoscience and Nanotechnology Letters, 2010, 2, 86-88.	0.4	4
88	A nanochannel fabrication technique using chemical-mechanical polishing (CMP) and thermal oxidation. , 0, , .		3
89	Piezoelectric unimorph MEMS deformable mirror for ultra-large telescopes. , 2005, 5717, 21.		3
90	Fabrication and characterization of U-shaped beams for the determination of Young's modulus modification due to Joule heating of polysilicon microstructures. , 0, , .		2

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91	<title>Design and fabrication of electrostatic actuators with corrugated membranes for MEMS deformable mirror in space</title>. , 2000, , .		2
92	Piezoelectric unimorph deformable mirror concept by wafer transfer for ultralarge space telescopes. , 2003, 4839, 703.		2
93	Transconductance and Coulomb Blockade Properties of In-Plane Grown Carbon Nanotube Field Effect Transistors. Nanoscience and Nanotechnology Letters, 2010, 2, 73-78.	0.4	2
94	Micro-capacitors based on electrochemically grown vertical arrays of gold nanowires as electrodes. Thin Solid Films, 2010, 518, 5007-5009.	0.8	2
95	Transportation of a liquid droplet at ultra-low voltages by tunable wetting on conjugated polymer electrodes. , 2013, , .		2
96	Controlled growth of 2D heterostructures and prevention of TMD oxidation. , 2018, , .		2
97	Development of Latching Type Large Vertical-Travel Microactuator. , 2005, , .		2
98	MEMS technology at NASA's Jet Propulsion Laboratory. , 2000, 4134, 16.		1
99	Site-Specific Magnetic Assembly of Nanowires for Sensor Arrays Fabrication. , 2006, , .		1
100	Piezoelectric microactuator technologies for wavefront correction in space. , 2007, , .		1
101	Hybrid linear microactuators and their control models for mirror shape correction. Journal of Micro-Nano Mechatronics, 2008, 4, 159-167.	1.0	1
102	Internationalization of gold and nickel nanowires by living cells. , 2008, , .		1
103	Nanoscale Graphene and Carbon Nanotube Lithography Using an Atomic Force Microscope. , 2009, , .		1
104	Antibody-functionalized magnetic nanowires for cell purification. , 2009, , .		1
105	Carbon-based nanodevices for sensors, actuators, and electronics. , 2009, , .		1
106	MEMS Thruster System for CubeSat Orbital Maneuver Applications. , 2009, , .		1
107	Engineered low-dimensional nanomaterials for sensors, actuators, and electronics. Journal of Micro/Nanolithography, MEMS, and MOEMS, 2010, 9, 041103.	1.0	1
108	Conceptual design considerations for a wireless intraocular pressure sensor system for effective glaucoma management. Journal of Medical Engineering and Technology, 2019, 43, 457-467.	0.8	1

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109	Characterization of Thermomechanical Properties of Polypyrrole Nanowires. , 2009, , .		1
110	Manipulation of Low-Dimensional Nanomaterials Using Water Meniscus. Nanoscience and Nanotechnology Letters, 2010, 2, 133-138.	0.4	1
111	Piezoelectrically Actuated Microvalves for Micropropulsion Applications. , 2002, , .		1
112	Fabrication and Characterization of Vertical Travel Linear Microactuator. , 2004, , .		1
113	Fabrication and Characterization of a Nanoscale Niâ€Al Bimorph for Reconfigurable Nanostructures. Nanoscience and Nanotechnology Letters, 2010, 2, 181-184.	0.4	1
114	A New Technique For Quantitative Determination Of The Stress Profile Along The Depth Of P+ Silicon Films. , 0, , .		0
115	Fabrication and dynamic testing of electrostatic actuators with p/sup +/- silicon diaphragms. , 0, , .		0
116	<title>Shape memory alloys for micromembrane actuation</title>. , 1999, 3825, 63.		0
117	Fabrication and characterization of vertical travel linear microactuator. , 2005, , .		0
118	Large aperture deformable mirror with a transferred single-crystal silicon membrane actuated using large stroke PZT unimorph actuators. , 0, , .		0
119	Active Membrane Using Electrostructure Graft Elastomer for Deployable and Lightweight Mirrors. , 2007, , 369.		0
120	Microfabricated Nanowire Diluter for Controlled Assembly of Nanowires. , 2008, , .		0
121	Copper Nanotubes for Packaging Applications. Aerospace Conference Proceedings IEEE, 2008, , .	0.0	0
122	Interfacial-Tension-Directed Self-Assembly of Nanowires on Superhydrophobic Surfaces. , 2008, , .		0
123	Electro-optical characterization of in-plane grown carbon nanotubes. Proceedings of SPIE, 2009, , .	0.8	0
124	Fabrication of vertically standing metal nanowire arrays on silicon substrates using anodized aluminum oxide (AAO) and polycarbonate (PC) templates. Proceedings of SPIE, 2009, , .	0.8	0
125	Engineered nanowires, carbon nanotubes and graphene for sensors, actuators and electronics. Proceedings of SPIE, 2010, , .	0.8	0
126	Graphene optoelectronics based on antidot superlattices. , 2011, , .		0

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127	Tungsten Disulfide Monolayers: Graphene-Assisted Antioxidation of Tungsten Disulfide Monolayers: Substrate and Electric-Field Effect (Adv. Mater. 18/2017). Advanced Materials, 2017, 29, .	11.1	0
128	Spin-Layer- and Spin-Valley-Locking Due to Symmetry in Differently-Stacked Tungsten Disulfide Bilayers. , 2019, , .		0
129	Development of a Carbon Nanotube-Based Nanoactuator for a Nano-Conveyer System. , 2008, , .		0
130	Vertical Arrays of Copper Nanotube Grown on Silicon Substrate by CMOS Compatible Electrochemical Process for IC Packaging Applications. Journal of Microelectronics and Electronic Packaging, 2009, 6, 154-157.	0.8	0
131	<l>A Special Issue on</l> Nanoscale Materials, Structures and Devices for Sensors and Systems Applications. Nanoscience and Nanotechnology Letters, 2010, 2, 63-64.	0.4	0
132	The influence of the substrate material on the optical properties of tungsten diselenide monolayers. , 2017, , .		0
133	Density-dependent excitonic properties and dynamics in 2D heterostructures consisting of boron nitride and monolayer or few-layer tungsten diselenide. , 2018, , .		0
134	1D and 2D materials, and flexible substrates. , 2019, , .		0
135	Current trends on flexible and wearable mechanical sensors based on conjugated polymers combined with carbon nanotubes. , 2022, , 361-399.		0