

Myunghwan Byun

List of Publications by Year in descending order

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Version: 2024-02-01

70
papers

5,199
citations

147801

31
h-index

102487

66
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76
all docs

76
docs citations

76
times ranked

7388
citing authors

#	ARTICLE	IF	CITATIONS
1	Designing Responsive Buckled Surfaces by Halftone Gel Lithography. <i>Science</i> , 2012, 335, 1201-1205.	12.6	727
2	Highly Efficient, Flexible Piezoelectric PZT Thin Film Nanogenerator on Plastic Substrates. <i>Advanced Materials</i> , 2014, 26, 2514-2520.	21.0	690
3	Self-Powered Cardiac Pacemaker Enabled by Flexible Single Crystalline PMN-PT Piezoelectric Energy Harvester. <i>Advanced Materials</i> , 2014, 26, 4880-4887.	21.0	558
4	A Hyperstretchable Elastic Composite Energy Harvester. <i>Advanced Materials</i> , 2015, 27, 2866-2875.	21.0	350
5	Topographically-Designed Triboelectric Nanogenerator via Block Copolymer Self-Assembly. <i>Nano Letters</i> , 2014, 14, 7031-7038.	9.1	310
6	Flexible Piezoelectric Thin Film Energy Harvesters and Nanosensors for Biomedical Applications. <i>Advanced Healthcare Materials</i> , 2015, 4, 646-658.	7.6	249
7	Self-powered fully-flexible light-emitting system enabled by flexible energy harvester. <i>Energy and Environmental Science</i> , 2014, 7, 4035-4043.	30.8	179
8	Flexible Inorganic Piezoelectric Acoustic Nanosensors for Biomimetic Artificial Hair Cells. <i>Advanced Functional Materials</i> , 2014, 24, 6914-6921.	14.9	176
9	An Unconventional Route to High-Efficiency Dye-Sensitized Solar Cells via Embedding Graphitic Thin Films into TiO ₂ Nanoparticle Photoanode. <i>Nano Letters</i> , 2012, 12, 479-485.	9.1	150
10	Flexible Crossbar-Structured Resistive Memory Arrays on Plastic Substrates via Inorganic-Based Laser Lift-Off. <i>Advanced Materials</i> , 2014, 26, 7480-7487.	21.0	118
11	Hierarchically Organized Structures Engineered from Controlled Evaporative Self-Assembly. <i>Nano Letters</i> , 2010, 10, 3111-3117.	9.1	101
12	Plasmonic dye-sensitized solar cells incorporated with Au-TiO ₂ nanostructures with tailored configurations. <i>Nanoscale</i> , 2014, 6, 1823-1832.	5.6	100
13	Robust Self-Assembly of Highly Ordered Complex Structures by Controlled Evaporation of Confined Microfluids. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 512-516.	13.8	96
14	Performance Enhancement of Electronic and Energy Devices via Block Copolymer Self-Assembly. <i>Advanced Materials</i> , 2015, 27, 3982-3998.	21.0	91
15	Large-Scale Hierarchically Structured Conjugated Polymer Assemblies with Enhanced Electrical Conductivity. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 2564-2568.	13.8	79
16	Swelling-driven rolling and anisotropic expansion of striped gel sheets. <i>Soft Matter</i> , 2013, 9, 8264.	2.7	77
17	Laser-induced phase separation of silicon carbide. <i>Nature Communications</i> , 2016, 7, 13562.	12.8	75
18	Flexible One Diode-One Phase Change Memory Array Enabled by Block Copolymer Self-Assembly. <i>ACS Nano</i> , 2015, 9, 4120-4128.	14.6	74

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19	Controlled evaporative self-assembly of hierarchically structured regioregular conjugated polymers. <i>Soft Matter</i> , 2009, 5, 1583.	2.7	71
20	Macroscopic Highly Aligned DNA Nanowires Created by Controlled Evaporative Self-Assembly. <i>ACS Nano</i> , 2013, 7, 4326-4333.	14.6	63
21	Assembling and positioning latex nanoparticles via controlled evaporative self-assembly. <i>Journal of Materials Chemistry</i> , 2011, 21, 16968.	6.7	62
22	An Unconventional Route to Hierarchically Ordered Block Copolymers on a Gradient Patterned Surface through Controlled Evaporative Self-Assembly. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 1122-1127.	13.8	56
23	Evaporative Organization of Hierarchically Structured Polymer Blend Rings. <i>Macromolecules</i> , 2008, 41, 9312-9317.	4.8	53
24	A Simple Route to Hierarchically Assembled Micelles and Inorganic Nanoparticles. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 12588-12592.	13.8	50
25	Mesoscale Patterns Formed by Evaporation of a Polymer Solution in the Proximity of a Sphere on a Smooth Substrate: A Molecular Weight and Curvature Effects. <i>Macromolecules</i> , 2007, 40, 2831-2836.	4.8	49
26	Laser-Induced Solid-Phase Doped Graphene. <i>ACS Nano</i> , 2014, 8, 7671-7677.	14.6	48
27	Self-Assembling Semicrystalline Polymer into Highly Ordered, Microscopic Concentric Rings by Evaporation. <i>Langmuir</i> , 2008, 24, 3525-3531.	3.5	44
28	Hierarchically Ordered Structures Enabled by Controlled Evaporative Self-Assembly. <i>Small</i> , 2010, 6, 2250-2255.	10.0	38
29	Harnessing Colloidal Crack Formation by Flow-Enabled Self-Assembly. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 4554-4559.	13.8	38
30	Polystyrene [~] Poly lactide Bottlebrush Block Copolymer at the Air/Water Interface. <i>Macromolecules</i> , 2009, 42, 9027-9033.	4.8	37
31	Thermally assisted nanotransfer printing with sub-20-nm resolution and 8-inch wafer scalability. <i>Science Advances</i> , 2020, 6, eabb6462.	10.3	35
32	Controlled evaporative self-assembly of hierarchically structured bottlebrush block copolymer with nanochannels. <i>Journal of Materials Chemistry</i> , 2011, 21, 14248.	6.7	30
33	Convenient and Robust Route to Photoswitchable Hierarchical Liquid Crystal Polymer Stripes via Flow-Enabled Self-Assembly. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 4961-4970.	8.0	29
34	Highly flexible, transparent and conductive ultrathin silver film heaters for wearable electronics applications. <i>Thin Solid Films</i> , 2020, 697, 137835.	1.8	27
35	Massively ordered microstructures composed of magnetic nanoparticles. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 264014.	1.8	26
36	Self-Structured Conductive Filament Nanoheater for Chalcogenide Phase Transition. <i>ACS Nano</i> , 2015, 9, 6587-6594.	14.6	26

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37	Guided Organization of DNA into Microring Arrays from Liquid Capillary Bridges. <i>Small</i> , 2011, 7, 1641-1646.	10.0	21
38	Ferroelectric Polymer Nanofibers Reminiscent of Morphotropic Phase Boundary Behavior for Improved Piezoelectric Energy Harvesting. <i>Small</i> , 2022, 18, e2104472.	10.0	16
39	Pattern formation of metal-oxide hybrid nanostructures via the self-assembly of di-block copolymer blends. <i>Nanoscale</i> , 2019, 11, 18559-18567.	5.6	15
40	A Nonconventional Approach to Patterned Nanoarrays of DNA Strands for Template-Assisted Assembly of Polyfluorene Nanowires. <i>Small</i> , 2016, 12, 4254-4263.	10.0	13
41	Spatially Ordered Poly(3-hexylthiophene) Fibril Nanostructures via Controlled Evaporative Self-Assembly. <i>Advanced Materials Technologies</i> , 2019, 4, 1800554.	5.8	12
42	Simple route to ridge optical waveguide fabricated via controlled evaporative self-assembly. <i>Journal of Materials Chemistry</i> , 2011, 21, 5230.	6.7	11
43	Nanogenerators: Highly Efficient, Flexible Piezoelectric PZT Thin Film Nanogenerator on Plastic Substrates (<i>Adv. Mater.</i> 16/2014). <i>Advanced Materials</i> , 2014, 26, 2450-2450.	21.0	9
44	Characterization of Copper-Graphite Composites Fabricated via Electrochemical Deposition and Spark Plasma Sintering. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 2853.	2.5	9
45	Transparent planar layer copper heaters for wearable electronics. <i>Applied Surface Science</i> , 2021, 559, 149895.	6.1	9
46	Micro-patterns of reduced graphene oxide (RG-O) platelets crafted by a self-assembled template. <i>Soft Matter</i> , 2011, 7, 6811.	2.7	7
47	Poly(vinylpyrrolidone)-modification of sol-gel films for flexible piezoelectric energy harvesting systems. <i>Thin Solid Films</i> , 2018, 663, 31-36.	1.8	5
48	Spontaneous capillary breakup of suspended gradient polymer stripes into spatially ordered dot arrays. <i>Applied Surface Science</i> , 2019, 475, 1003-1009.	6.1	5
49	Nanogenerators: Self-Powered Cardiac Pacemaker Enabled by Flexible Single Crystalline PMN-PT Piezoelectric Energy Harvester (<i>Adv. Mater.</i> 28/2014). <i>Advanced Materials</i> , 2014, 26, 4754-4754.	21.0	4
50	Harnessing Colloidal Crack Formation by Flow-Enabled Self-Assembly. <i>Angewandte Chemie</i> , 2017, 129, 4625-4630.	2.0	4
51	Controlled self-assembly of block copolymers in printed sub-20 nm cross-bar structures. <i>Nanoscale Advances</i> , 2021, 3, 5083-5089.	4.6	4
52	Facile Synthesis of Mesoporous Silica at Room Temperature for CO ₂ Adsorption. <i>Micromachines</i> , 2022, 13, 926.	2.9	4
53	A 3D printing route to fabrication of ZrCuSi alloy target for ZrCuSiN nanocomposite thin films. <i>Applied Surface Science</i> , 2021, 562, 150136.	6.1	3
54	Titelbild: Harnessing Colloidal Crack Formation by Flow-Enabled Self-Assembly (<i>Angew. Chem.</i> 16/2017). <i>Angewandte Chemie</i> , 2017, 129, 4429-4429.	2.0	2

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55	Micro-to-Nanometer Scale Patterning of Perovskite Inks via Controlled Self-Assemblies. <i>Materials</i> , 2022, 15, 1521.	2.9	2
56	SELF-ASSEMBLY OF HIGHLY ORDERED STRUCTURES ENABLED BY CONTROLLED EVAPORATION OF CONFINED MICROFLUIDS. , 2012, , 295-349.		1
57	Flexible Electronics: Flexible Crossbar-Structured Resistive Memory Arrays on Plastic Substrates via Inorganic-Based Laser Lift-Off (<i>Adv. Mater.</i> 44/2014). <i>Advanced Materials</i> , 2014, 26, 7418-7418.	21.0	1
58	Hierarchically ordered hybrid nanostructures via spontaneous self-assembly of block copolymer blends. <i>Thin Solid Films</i> , 2020, 701, 137928.	1.8	1
59	Thickness estimation of the silica-like thin layers via swelling-driven wrinkling instability. <i>Thin Solid Films</i> , 2020, 697, 137812.	1.8	1
60	Grayscale and Halftone Gel Lithography as Promising Techniques for Swelling-Induced Deformation of Smart Polymer Hydrogel Films. <i>Lecture Notes in Electrical Engineering</i> , 2017, , 122-125.	0.4	1
61	Ferroelectric Polymer Nanofibers Reminiscent of Morphotropic Phase Boundary Behavior for Improved Piezoelectric Energy Harvesting (<i>Small</i> 15/2022). <i>Small</i> , 2022, 18, .	10.0	1
62	Self-assembly: Hierarchically Ordered Structures Enabled by Controlled Evaporative Self-Assembly (<i>Small</i> 20/2010). <i>Small</i> , 2010, 6, n/a-n/a.	10.0	0
63	Sensors: Flexible Inorganic Piezoelectric Acoustic Nanosensors for Biomimetic Artificial Hair Cells (<i>Adv. Funct. Mater.</i> 44/2014). <i>Advanced Functional Materials</i> , 2014, 24, 6898-6898.	14.9	0
64	Stress-induced trench narrowing in Cu interconnect of sub-20 nm node: FEM simulation. <i>Materials Science in Semiconductor Processing</i> , 2016, 56, 100-105.	4.0	0
65	Nanowires: A Nonconventional Approach to Patterned Nanoarrays of DNA Strands for Template-Assisted Assembly of Polyfluorene Nanowires (<i>Small</i> 31/2016). <i>Small</i> , 2016, 12, 4160-4160.	10.0	0
66	Preparation of organic-inorganic nanocomposites using directly synthesized Br-functionalized nanocrystals. <i>Applied Surface Science</i> , 2019, 475, 695-699.	6.1	0
67	Lithography-Free Route to Hierarchical Structuring of High- κ Block Copolymers on a Gradient Patterned Surface. <i>Materials</i> , 2020, 13, 304.	2.9	0
68	Sintering Temperature Effect on the Luminescence Properties of Y2O3:Tb3+ Phosphors Synthesized using a Liquid-Phase Reaction. <i>Journal of the Korean Physical Society</i> , 2020, 77, 288-292.	0.7	0
69	Effect of Surface Roughness on the Formation of Nano-to-Mirco Patterns Using Pattern Transfer Printing. <i>Journal of Korean Institute of Metals and Materials</i> , 2020, 58, 26-31.	1.0	0
70	Facile synthesis of Cd _{1-x} Zn _x Se _{1-y} S _y /CdSe/Cd _{1-x} Zn _x Se _{1-y} S _y nanoplatelets with precisely controlled emission wavelength. <i>Thin Solid Films</i> , 2022, 751, 139218.	1.8	0