Myunghwan Byun

List of Publications by Year
in descending order

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70 papers	5,199 citations	147726 31 h-index	102432 66 g-index
76 all docs	76 docs citations	76 times ranked	7388 citing authors

#	Article	IF	Citations
1	Designing Responsive Buckled Surfaces by Halftone Gel Lithography. Science, 2012, 335, 1201-1205.	6.0	727
2	Highlyâ€Efficient, Flexible Piezoelectric PZT Thin Film Nanogenerator on Plastic Substrates. Advanced Materials, 2014, 26, 2514-2520.	11.1	690
3	Selfâ€Powered Cardiac Pacemaker Enabled by Flexible Single Crystalline PMNâ€PT Piezoelectric Energy Harvester. Advanced Materials, 2014, 26, 4880-4887.	11.1	558
4	A Hyperâ€Stretchable Elasticâ€Composite Energy Harvester. Advanced Materials, 2015, 27, 2866-2875.	11.1	350
5	Topographically-Designed Triboelectric Nanogenerator via Block Copolymer Self-Assembly. Nano Letters, 2014, 14, 7031-7038.	4.5	310
6	Flexible Piezoelectric Thinâ€Film Energy Harvesters and Nanosensors for Biomedical Applications. Advanced Healthcare Materials, 2015, 4, 646-658.	3.9	249
7	Self-powered fully-flexible light-emitting system enabled by flexible energy harvester. Energy and Environmental Science, 2014, 7, 4035-4043.	15.6	179
8	Flexible Inorganic Piezoelectric Acoustic Nanosensors for Biomimetic Artificial Hair Cells. Advanced Functional Materials, 2014, 24, 6914-6921.	7.8	176
9	An Unconventional Route to High-Efficiency Dye-Sensitized Solar Cells via Embedding Graphitic Thin Films into TiO₂ Nanoparticle Photoanode. Nano Letters, 2012, 12, 479-485.	4.5	150
10	Flexible Crossbarâ€Structured Resistive Memory Arrays on Plastic Substrates via Inorganicâ€Based Laser Liftâ€Off. Advanced Materials, 2014, 26, 7480-7487.	11.1	118
11	Hierarchically Organized Structures Engineered from Controlled Evaporative Self-Assembly. Nano Letters, 2010, 10, 3111-3117.	4.5	101
12	Plasmonic dye-sensitized solar cells incorporated with Auâ€“TiO₂nanostructures with tailored configurations. Nanoscale, 2014, 6, 1823-1832.	2.8	100
13	Robust Selfâ€Assembly of Highly Ordered Complex Structures by Controlled Evaporation of Confined Microfluids. Angewandte Chemie - International Edition, 2009, 48, 512-516.	7.2	96
14	Performance Enhancement of Electronic and Energy Devices via Block Copolymer Selfâ€Assembly. Advanced Materials, 2015, 27, 3982-3998.	11.1	91
15	Largeâ€Scale Hierarchically Structured Conjugated Polymer Assemblies with Enhanced Electrical Conductivity. Angewandte Chemie - International Edition, 2013, 52, 2564-2568.	7.2	79
16	Swelling-driven rolling and anisotropic expansion of striped gel sheets. Soft Matter, 2013, 9, 8264.	1.2	77
17	Laser-induced phase separation of silicon carbide. Nature Communications, 2016, 7, 13562.	5.8	75
18	Flexible One Diode-One Phase Change Memory Array Enabled by Block Copolymer Self-Assembly. ACS Nano, 2015, 9, 4120-4128.	7.3	74

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19	Controlled evaporative self-assembly of hierarchically structured regioregular conjugated polymers. Soft Matter, 2009, 5, 1583.	1.2	71
20	Macroscopic Highly Aligned DNA Nanowires Created by Controlled Evaporative Self-Assembly. ACS Nano, 2013, 7, 4326-4333.	7.3	63
21	Assembling and positioning latex nanoparticles via controlled evaporative self-assembly. Journal of Materials Chemistry, 2011, 21, 16968.	6.7	62
22	An Unconventional Route to Hierarchically Ordered Block Copolymers on a Gradient Patterned Surface through Controlled Evaporative Selfâ€Assembly. Angewandte Chemie - International Edition, 2013, 52, 1122-1127.	7.2	56
23	Evaporative Organization of Hierarchically Structured Polymer Blend Rings. Macromolecules, 2008, 41, 9312-9317.	2.2	53
24	A Simple Route to Hierarchically Assembled Micelles and Inorganic Nanoparticles. Angewandte Chemie - International Edition, 2012, 51, 12588-12592.	7.2	50
25	Mesoscale Patterns Formed by Evaporation of a Polymer Solution in the Proximity of a Sphere on a Smooth Substrate:Â Molecular Weight and Curvature Effects. Macromolecules, 2007, 40, 2831-2836.	2.2	49
26	Laser-Induced Solid-Phase Doped Graphene. ACS Nano, 2014, 8, 7671-7677.	7.3	48
27	Self-Assembling Semicrystalline Polymer into Highly Ordered, Microscopic Concentric Rings by Evaporation. Langmuir, 2008, 24, 3525-3531.	1.6	44
28	Hierarchically Ordered Structures Enabled by Controlled Evaporative Selfâ€Assembly. Small, 2010, 6, 2250-2255.	5.2	38
29	Harnessing Colloidal Crack Formation by Flowâ€Enabled Selfâ€Assembly. Angewandte Chemie - International Edition, 2017, 56, 4554-4559.	7.2	38
30	Polystyreneâ^'Polylactide Bottlebrush Block Copolymer at the Air/Water Interface. Macromolecules, 2009, 42, 9027-9033.	2.2	37
31	Thermally assisted nanotransfer printing with subâ€“20-nm resolution and 8-inch wafer scalability. Science Advances, 2020, 6, eabb6462.	4.7	35
32	Controlled evaporative self-assembly of hierarchically structured bottlebrush block copolymer with nanochannels. Journal of Materials Chemistry, 2011, 21, 14248.	6.7	30
33	Convenient and Robust Route to Photoswitchable Hierarchical Liquid Crystal Polymer Stripes via Flow-Enabled Self-Assembly. ACS Applied Materials & Interfaces, 2018, 10, 4961-4970.	4.0	29
34	Highly flexible, transparent and conductive ultrathin silver film heaters for wearable electronics applications. Thin Solid Films, 2020, 697, 137835.	0.8	27
35	Massively ordered microstructures composed of magnetic nanoparticles. Journal of Physics Condensed Matter, 2009, 21, 264014.	0.7	26
36	Self-Structured Conductive Filament Nanoheater for Chalcogenide Phase Transition. ACS Nano, 2015, 9, 6587-6594.	7.3	26

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37	Guided Organization of Î»â€DNA into Microring Arrays from Liquid Capillary Bridges. Small, 2011, 7, 1641-1646.	5.2	21
38	Ferroelectric Polymer Nanofibers Reminiscent of Morphotropic Phase Boundary Behavior for Improved Piezoelectric Energy Harvesting. Small, 2022, 18, e2104472.	5.2	16
39	Pattern formation of metalâ€“oxide hybrid nanostructures via the self-assembly of di-block copolymer blends. Nanoscale, 2019, 11, 18559-18567.	2.8	15
40	A Nonconventional Approach to Patterned Nanoarrays of DNA Strands for Templateâ€Assisted Assembly of Polyfluorene Nanowires. Small, 2016, 12, 4254-4263.	5.2	13
41	Spatially Ordered Poly(3â€hexylthiophene) Fibril Nanostructures via Controlled Evaporative Selfâ€Assembly. Advanced Materials Technologies, 2019, 4, 1800554.	3.0	12
42	Simple route to ridge optical waveguide fabricated via controlled evaporative self-assembly. Journal of Materials Chemistry, 2011, 21, 5230.	6.7	11
43	Nanogenerators: Highlyâ€Efficient, Flexible Piezoelectric PZT Thin Film Nanogenerator on Plastic Substrates (Adv. Mater. 16/2014). Advanced Materials, 2014, 26, 2450-2450.	11.1	9
44	Characterization of Copperâ€“Graphite Composites Fabricated via Electrochemical Deposition and Spark Plasma Sintering. Applied Sciences (Switzerland), 2019, 9, 2853.	1.3	9
45	Transparent planar layer copper heaters for wearable electronics. Applied Surface Science, 2021, 559, 149895.	3.1	9
46	Micro-patterns of reduced graphene oxide (RG-O) platelets crafted by a self-assembled template. Soft Matter, 2011, 7, 6811.	1.2	7
47	Poly(vinylpyrrolidone)-modification of sol-gel films for flexible piezoelectric energy harvesting systems. Thin Solid Films, 2018, 663, 31-36.	0.8	5
48	Spontaneous capillary breakup of suspended gradient polymer stripes into spatially ordered dot arrays. Applied Surface Science, 2019, 475, 1003-1009.	3.1	5
49	Nanogenerators: Self-Powered Cardiac Pacemaker Enabled by Flexible Single Crystalline PMN-PT Piezoelectric Energy Harvester (Adv. Mater. 28/2014). Advanced Materials, 2014, 26, 4754-4754.	11.1	4
50	Harnessing Colloidal Crack Formation by Flowâ€Enabled Selfâ€Assembly. Angewandte Chemie, 2017, 129, 4625-4630.	1.6	4
51	Controlled self-assembly of block copolymers in printed sub-20 nm cross-bar structures. Nanoscale Advances, 2021, 3, 5083-5089.	2.2	4
52	Facile Synthesis of Mesoporous Silica at Room Temperature for CO2 Adsorption. Micromachines, 2022, 13, 926.	1.4	4
53	A 3D printing route to fabrication of ZrCuSi alloy target for ZrCuSiN nanocomposite thin films. Applied Surface Science, 2021, 562, 150136.	3.1	3
54	Titelbild: Harnessing Colloidal Crack Formation by Flowâ€Enabled Selfâ€Assembly (Angew. Chem. 16/2017). Angewandte Chemie, 2017, 129, 4429-4429.	1.6	2

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55	Micro-to-Nanometer Scale Patterning of Perovskite Inks via Controlled Self-Assemblies. Materials, 2022, 15, 1521.	1.3	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 (Adv. Mater. 44/2014). Advanced Materials, 2014, 26, 7418-7418.	11.1	1
58	Hierarchically ordered hybrid nanostructures via spontaneous self-assembly of block copolymer blends. Thin Solid Films, 2020, 701, 137928.	0.8	1
59	Thickness estimation of the silica-like thin layers via swelling-driven wrinkling instability. Thin Solid Films, 2020, 697, 137812.	0.8	1
60	Grayscale and Halftone Gel Lithography as Promising Techniques for Swelling-Induced Deformation of Smart Polymer Hydrogel Films. Lecture Notes in Electrical Engineering, 2017, , 122-125.	0.3	1
61	Ferroelectric Polymer Nanofibers Reminiscent of Morphotropic Phase Boundary Behavior for Improved Piezoelectric Energy Harvesting (Small 15/2022). Small, 2022, 18, .	5.2	1
62	Self-assembly: Hierarchically Ordered Structures Enabled by Controlled Evaporative Self-Assembly (Small 20/2010). Small, 2010, 6, n/a-n/a.	5.2	0
63	Sensors: Flexible Inorganic Piezoelectric Acoustic Nanosensors for Biomimetic Artificial Hair Cells (Adv. Funct. Mater. 44/2014). Advanced Functional Materials, 2014, 24, 6898-6898.	7.8	0
64	Stress-induced trench narrowing in Cu interconnect of sub-20 nm node: FEM simulation. Materials Science in Semiconductor Processing, 2016, 56, 100-105.	1.9	0
65	Nanowires: A Nonconventional Approach to Patterned Nanoarrays of DNA Strands for Templateâ€Assisted Assembly of Polyfluorene Nanowires (Small 31/2016). Small, 2016, 12, 4160-4160.	5.2	0
66	Preparation of organic-inorganic nanocomposites using directly synthesized Br-functionalized nanocrystals. Applied Surface Science, 2019, 475, 695-699.	3.1	0
67	Lithography-Free Route to Hierarchical Structuring of High-Ï‡ Block Copolymers on a Gradient Patterned Surface. Materials, 2020, 13, 304.	1.3	0
68	Sintering Temperature Effect on the Luminescence Properties of Y2O3:Tb3+ Phosphors Synthesized using a Liquid-Phase Reaction. Journal of the Korean Physical Society, 2020, 77, 288-292.	0.3	0
69	Effect of Surface Roughness on the Formation of Nano-to-Mirco Patterns Using Pattern Transfer Printing. Journal of Korean Institute of Metals and Materials, 2020, 58, 26-31.	0.4	0
70	Facile synthesis of Cd1-xZnxSe1-ySy/CdSe/Cd1-xZnxSe1-ySy nanoplatelets with precisely controlled emission wavelength. Thin Solid Films, 2022, 751, 139218.	0.8	0