Myunghwan Byun

List of Publications by Citations

70 papers	4,300 citations	29 h-index	65 g-index
76 ext. papers	4,779 ext. citations	10.4 avg, IF	5.35 L-index

#	Paper	IF	Citations
70	Designing responsive buckled surfaces by halftone gel lithography. *Science*, **2012**, 335, 1201-5	33.3	618
69	Highly-efficient, flexible piezoelectric PZT thin film nanogenerator on plastic substrates. *Advanced Materials*, **2014**, 26, 2514-20	24	538
68	Self-powered cardiac pacemaker enabled by flexible single crystalline PMN-PT piezoelectric energy harvester. *Advanced Materials*, **2014**, 26, 4880-7	24	445
67	A hyper-stretchable elastic-composite energy harvester. *Advanced Materials*, **2015**, 27, 2866-75	24	281
66	Topographically-designed triboelectric nanogenerator via block copolymer self-assembly. *Nano Letters*, **2014**, 14, 7031-8	11.5	258
65	Flexible piezoelectric thin-film energy harvesters and nanosensors for biomedical applications. *Advanced Healthcare Materials*, **2015**, 4, 646-58	10.1	187
64	Self-powered fully-flexible light-emitting system enabled by flexible energy harvester. *Energy and Environmental Science*, **2014**, 7, 4035-4043	35.4	144
63	An unconventional route to high-efficiency dye-sensitized solar cells via embedding graphitic thin films into TiO2 nanoparticle photoanode. *Nano Letters*, **2012**, 12, 479-85	11.5	142
62	Flexible Inorganic Piezoelectric Acoustic Nanosensors for Biomimetic Artificial Hair Cells. *Advanced Functional Materials*, **2014**, 24, 6914-6921	15.6	132
61	Flexible crossbar-structured resistive memory arrays on plastic substrates via inorganic-based laser lift-off. *Advanced Materials*, **2014**, 26, 7480-7	24	102
60	Hierarchically organized structures engineered from controlled evaporative self-assembly. *Nano Letters*, **2010**, 10, 3111-7	11.5	96
59	Plasmonic dye-sensitized solar cells incorporated with Au-TiO□nanostructures with tailored configurations. *Nanoscale*, **2014**, 6, 1823-32	7.7	94
58	Robust self-assembly of highly ordered complex structures by controlled evaporation of confined microfluids. *Angewandte Chemie - International Edition*, **2009**, 48, 512-6	16.4	94
57	Performance Enhancement of Electronic and Energy Devices via Block Copolymer Self-Assembly. *Advanced Materials*, **2015**, 27, 3982-98	24	79
56	Large-scale hierarchically structured conjugated polymer assemblies with enhanced electrical conductivity. *Angewandte Chemie - International Edition*, **2013**, 52, 2564-8	16.4	72
55	Controlled evaporative self-assembly of hierarchically structured regioregular conjugated polymers. *Soft Matter*, **2009**, 5, 1583	3.6	69
54	Swelling-driven rolling and anisotropic expansion of striped gel sheets. *Soft Matter*, **2013**, 9, 8264	3.6	68

53	Assembling and positioning latex nanoparticlesvia controlled evaporative self-assembly. *Journal of Materials Chemistry*, **2011**, 21, 16968		57
52	Macroscopic highly aligned DNA nanowires created by controlled evaporative self-assembly. *ACS Nano*, **2013**, 7, 4326-33	16.7	55
51	Flexible one diode-one phase change memory array enabled by block copolymer self-assembly. *ACS Nano*, **2015**, 9, 4120-8	16.7	53
50	Evaporative Organization of Hierarchically Structured Polymer Blend Rings. *Macromolecules*, **2008**, 41, 9312-9317	5.5	53
49	An unconventional route to hierarchically ordered block copolymers on a gradient patterned surface through controlled evaporative self-assembly. *Angewandte Chemie - International Edition*, **2013**, 52, 1122-7	16.4	51
48	Mesoscale Patterns Formed by Evaporation of a Polymer Solution in the Proximity of a Sphere on a Smooth Substrate: Molecular Weight and Curvature Effects. *Macromolecules*, **2007**, 40, 2831-2836	5.5	49
47	A simple route to hierarchically assembled micelles and inorganic nanoparticles. *Angewandte Chemie - International Edition*, **2012**, 51, 12588-92	16.4	48
46	Laser-induced phase separation of silicon carbide. *Nature Communications*, **2016**, 7, 13562	17.4	47
45	Self-assembling semicrystalline polymer into highly ordered, microscopic concentric rings by evaporation. *Langmuir*, **2008**, 24, 3525-31	4	42
44	Laser-induced solid-phase doped graphene. *ACS Nano*, **2014**, 8, 7671-7	16.7	41
43	PolystyreneBPolylactide Bottlebrush Block Copolymer at the Air/Water Interface. *Macromolecules*, **2009**, 42, 9027-9033	5.5	36
42	Hierarchically ordered structures enabled by controlled evaporative self-assembly. *Small*, **2010**, 6, 2250-51		36
41	Controlled evaporative self-assembly of hierarchically structured bottlebrush block copolymer with nanochannels. *Journal of Materials Chemistry*, **2011**, 21, 14248		29
40	Harnessing Colloidal Crack Formation by Flow-Enabled Self-Assembly. *Angewandte Chemie - International Edition*, **2017**, 56, 4554-4559	16.4	27
39	Convenient and Robust Route to Photoswitchable Hierarchical Liquid Crystal Polymer Stripes via Flow-Enabled Self-Assembly. *ACS Applied Materials & Interfaces*, **2018**, 10, 4961-4970	9.5	26
38	Massively ordered microstructures composed of magnetic nanoparticles. *Journal of Physics Condensed Matter*, **2009**, 21, 264014	1.8	24
37	A Simple Route to Hierarchically Assembled Micelles and Inorganic Nanoparticles. *Angewandte Chemie*, **2012**, 124, 12756-12760	3.6	21
36	Self-Structured Conductive Filament Nanoheater for Chalcogenide Phase Transition. *ACS Nano*, **2015**, 9, 6587-94	16.7	20

35	Guided organization of DNA into microring arrays from liquid capillary bridges. *Small*, **2011**, 7, 1641-6	11	19
34	Highly flexible, transparent and conductive ultrathin silver film heaters for wearable electronics applications. *Thin Solid Films*, **2020**, 697, 137835	2.2	17
33	Thermally assisted nanotransfer printing with sub-20-nm resolution and 8-inch wafer scalability. *Science Advances*, **2020**, 6, eabb6462	14.3	15
32	Robust Self-Assembly of Highly Ordered Complex Structures by Controlled Evaporation of Confined Microfluids. *Angewandte Chemie*, **2009**, 121, 520-524	3.6	13
31	A Nonconventional Approach to Patterned Nanoarrays of DNA Strands for Template-Assisted Assembly of Polyfluorene Nanowires. *Small*, **2016**, 12, 4254-63	11	11
30	Large-Scale Hierarchically Structured Conjugated Polymer Assemblies with Enhanced Electrical Conductivity. *Angewandte Chemie*, **2013**, 125, 2624-2628	3.6	11
29	Spatially Ordered Poly(3-hexylthiophene) Fibril Nanostructures via Controlled Evaporative Self-Assembly. *Advanced Materials Technologies*, **2019**, 4, 1800554	6.8	10
28	Nanogenerators: Highly-Efficient, Flexible Piezoelectric PZT Thin Film Nanogenerator on Plastic Substrates (Adv. Mater. 16/2014). *Advanced Materials*, **2014**, 26, 2450-2450	24	9
27	Simple route to ridge optical waveguide fabricated via controlled evaporative self-assembly. *Journal of Materials Chemistry*, **2011**, 21, 5230		9
26	Pattern formation of metal-oxide hybrid nanostructures via the self-assembly of di-block copolymer blends. *Nanoscale*, **2019**, 11, 18559-18567	7.7	8
25	Micro-patterns of reduced graphene oxide (RG-O) platelets crafted by a self-assembled template. *Soft Matter*, **2011**, 7, 6811	3.6	7
24	Characterization of Copper Graphite Composites Fabricated via Electrochemical Deposition and Spark Plasma Sintering. *Applied Sciences (Switzerland)*, **2019**, 9, 2853	2.6	6
23	Harnessing Colloidal Crack Formation by Flow-Enabled Self-Assembly. *Angewandte Chemie*, **2017**, 129, 4625-4630	3.6	4
22	Spontaneous capillary breakup of suspended gradient polymer stripes into spatially ordered dot arrays. *Applied Surface Science*, **2019**, 475, 1003-1009	6.7	4
21	Poly(vinylpyrrolidone)-modification of sol-gel films for flexible piezoelectric energy harvesting systems. *Thin Solid Films*, **2018**, 663, 31-36	2.2	4
20	Titelbild: Harnessing Colloidal Crack Formation by Flow-Enabled Self-Assembly (Angew. Chem. 16/2017). *Angewandte Chemie*, **2017**, 129, 4429-4429	3.6	2
19	An Unconventional Route to Hierarchically Ordered Block Copolymers on a Gradient Patterned Surface through Controlled Evaporative Self-Assembly. *Angewandte Chemie*, **2013**, 125, 1160-1165	3.6	2
18	Transparent planar layer copper heaters for wearable electronics. *Applied Surface Science*, **2021**, 559, 149895	6.7	2

List of Publications

17	Thickness estimation of the silica-like thin layers via swelling-driven wrinkling instability. *Thin Solid Films*, **2020**, 697, 137812	2.2	1
16	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	24	1
15	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	24	1
14	SELF-ASSEMBLY OF HIGHLY ORDERED STRUCTURES ENABLED BY CONTROLLED EVAPORATION OF CONFINED MICROFLUIDS **2012**, 295-349		1
13	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	0.2	1
12	Ferroelectric Polymer Nanofibers Reminiscent of Morphotropic Phase Boundary Behavior for Improved Piezoelectric Energy Harvesting.. *Small*, **2022**, e2104472	11	1
11	Hierarchically ordered hybrid nanostructures via spontaneous self-assembly of block copolymer blends. *Thin Solid Films*, **2020**, 701, 137928	2.2	
10	Nanowires: A Nonconventional Approach to Patterned Nanoarrays of DNA Strands for Template-Assisted Assembly of Polyfluorene Nanowires (Small 31/2016). *Small*, **2016**, 12, 4160-4160	11	
9	Sensors: Flexible Inorganic Piezoelectric Acoustic Nanosensors for Biomimetic Artificial Hair Cells (Adv. Funct. Mater. 44/2014). *Advanced Functional Materials*, **2014**, 24, 6898-6898	15.6	
8	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	0.6	
7	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	1	
6	Stress-induced trench narrowing in Cu interconnect of sub-20 nm node: FEM simulation. *Materials Science in Semiconductor Processing*, **2016**, 56, 100-105	4.3	
5	Preparation of organic-inorganic nanocomposites using directly synthesized Br-functionalized nanocrystals. *Applied Surface Science*, **2019**, 475, 695-699	6.7	
4	A 3D printing route to fabrication of ZrCuSi alloy target for ZrCuSiN nanocomposite thin films. *Applied Surface Science*, **2021**, 562, 150136	6.7	
3	Controlled self-assembly of block copolymers in printed sub-20 nm cross-bar structures. *Nanoscale Advances*, **2021**, 3, 5083-5089	5.1	
2	Facile synthesis of Cd1-xZnxSe1-ySy/CdSe/Cd1-xZnxSe1-ySy nanoplatelets with precisely controlled emission wavelength. *Thin Solid Films*, **2022**, 751, 139218	2.2	
1	Ferroelectric Polymer Nanofibers Reminiscent of Morphotropic Phase Boundary Behavior for Improved Piezoelectric Energy Harvesting (Small 15/2022). *Small*, **2022**, 18, 2270072	11	