Hyosung An

List of Publications by Year
in descending order

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121	6,160	66343	76900
papers	citations	42 h-index	74 g-index

124	124	124	7174
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Antioxidants Unlock Shelf-Stable Ti3C2T (MXene) Nanosheet Dispersions. Matter, 2019, 1, 513-526.	10.0	436
2	Oxidation stability of Ti3C2Tx MXene nanosheets in solvents and composite films. Npj 2D Materials and Applications, 2019, 3, .	7.9	312
3	Electrochemically enabled polyelectrolyte multilayer devices: from fuel cells to sensors. Soft Matter, 2007, 3, 804.	2.7	245
4	Inkjet Printing of Conjugated Polymer Precursors on Paper Substrates for Colorimetric Sensing and Flexible Electrothermochromic Display. Advanced Materials, 2011, 23, 5492-5497.	21.0	231
5	Surface-agnostic highly stretchable and bendable conductive MXene multilayers. Science Advances, 2018, 4, eaaq0118.	10.3	229
6	Elastomeric Flexible Free-Standing Hydrogen-Bonded Nanoscale Assemblies. Journal of the American Chemical Society, 2005, 127, 17228-17234.	13.7	214
7	Polypeptide organic radical batteries. Nature, 2021, 593, 61-66.	27.8	195
8	Mechanically Strong Graphene/Aramid Nanofiber Composite Electrodes for Structural Energy and Power. ACS Nano, 2017, 11, 6682-6690.	14.6	190
9	Recent advances in conjugated polymer energy storage. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 468-480.	2.1	175
10	Water Sorption in MXene/Polyelectrolyte Multilayers for Ultrafast Humidity Sensing. ACS Applied Nano Materials, 2019, 2, 948-955.	5.0	173
11	Real-time insight into the doping mechanism of redox-active organic radical polymers. Nature Materials, 2019, 18, 69-75.	27.5	140
12	A protective layer approach to solvatochromic sensors. Nature Communications, 2013, 4, 2461.	12.8	136
13	Molecular Origin of the Glass Transition in Polyelectrolyte Assemblies. ACS Central Science, 2018, 4, 638-644.	11.3	100
14	pH, Nanosheet Concentration, and Antioxidant Affect the Oxidation of Ti₃C₂T_x and Ti₂CT_x MXene Dispersions. Advanced Materials Interfaces, 2020, 7, 2000845.	3.7	99
15	Polyaniline/Vanadium Pentoxide Layer-by-Layer Electrodes for Energy Storage. Chemistry of Materials, 2012, 24, 181-189.	6.7	97
16	Effect of the Layer-by-Layer (LbL) Deposition Method on the Surface Morphology and Wetting Behavior of Hydrophobically Modified PEO and PAA LbL Films. Langmuir, 2008, 24, 7995-8000.	3.5	95
17	Robust and Flexible Aramid Nanofiber/Graphene Layer-by-Layer Electrodes. ACS Applied Materials & Interfaces, 2017, 9, 17125-17135.	8.0	94
18	Effect of confinement on the bubble points of hydrocarbons in nanoporous media. AICHE Journal, 2016, 62, 1772-1780.	3.6	89

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19	Process Safety Analysis for Ti₃C₂T_x MXene Synthesis and Processing. Industrial & Engineering Chemistry Research, 2019, 58, 1570-1579.	3.7	89
20	Electrochemically Active Polymers for Electrochemical Energy Storage: Opportunities and Challenges. ACS Macro Letters, 2013, 2, 839-844.	4.8	86
21	Confinement-Induced Supercriticality and Phase Equilibria of Hydrocarbons in Nanopores. Langmuir, 2016, 32, 11506-11513.	3.5	85
22	Oxidatively stable polyaniline:polyacid electrodes for electrochemical energy storage. Physical Chemistry Chemical Physics, 2013, 15, 9654.	2.8	82
23	Harnessing the Power of Plastics: Nanostructured Polymer Systems in Lithium-Ion Batteries. ACS Energy Letters, 2017, 2, 1919-1936.	17.4	77
24	A practical guide to quartz crystal microbalance with dissipation monitoring of thin polymer films. Journal of Polymer Science, 2022, 60, 1090-1107.	3.8	76
25	Layer-by-Layer Assembly of Reduced Graphene Oxide and MXene Nanosheets for Wire-Shaped Flexible Supercapacitors. ACS Applied Materials & Interfaces, 2021, 13, 14068-14076.	8.0	74
26	Polyaniline nanofiber/electrochemically reduced graphene oxide layer-by-layer electrodes for electrochemical energy storage. Journal of Materials Chemistry A, 2015, 3, 3757-3767.	10.3	72
27	Role of Salt and Water in the Plasticization of PDAC/PSS Polyelectrolyte Assemblies. Journal of Physical Chemistry B, 2017, 121, 322-333.	2.6	72
28	High Modulus, Thermally Stable, and Self-Extinguishing Aramid Nanofiber Separators. ACS Applied Materials & Interfaces, 2020, 12, 25756-25766.	8.0	71
29	Anisotropic Structure and Transport in Self-Assembled Layered Polymerâ^'Clay Nanocomposites. Langmuir, 2007, 23, 8515-8521.	3.5	70
30	Highly Multifunctional Dopamine-Functionalized Reduced Graphene Oxide Supercapacitors. Matter, 2019, 1, 1532-1546.	10.0	66
31	Timeâ€“Temperature and Timeâ€“Water Superposition Principles Applied to Poly(allylamine)/Poly(acrylic) Tj ETQq1 1 0.784314 rgBT /O	4.8	61
32	Water-dispersible Ti3C2Tz MXene nanosheets by molten salt etching. IScience, 2021, 24, 103403.	4.1	60
33	Unraveling the Morphologyâ€“Function Relationships of Polyamide Membranes Using Quantitative Electron Tomography. ACS Applied Materials & Interfaces, 2019, 11, 8517-8526.	8.0	53
34	Hydration and Temperature Response of Water Mobility in Poly(diallyldimethylammonium)â€“Poly(sodium 4-styrenesulfonate) Complexes. Macromolecules, 2018, 51, 8268-8277.	4.8	49
35	Annealed Ti₃C₂T_z MXene Films for Oxidation-Resistant Functional Coatings. ACS Applied Nano Materials, 2020, 3, 10578-10585.	5.0	49
36	Porous organic/inorganic hybrid one-dimensional photonic crystals for rapid visual detection of organic solvents. Journal of Materials Chemistry C, 2018, 6, 2704-2711.	5.5	48

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37	100th Anniversary of Macromolecular Science Viewpoint: Fundamentals for the Future of Macromolecular Nitroxide Radicals. ACS Macro Letters, 2020, 9, 358-370.	4.8	47
38	Porous polyaniline nanofiber/vanadium pentoxide layer-by-layer electrodes for energy storage. Journal of Materials Chemistry A, 2013, 1, 7648.	10.3	46
39	Thermal Transitions in Polyelectrolyte Assemblies Occur via a Dehydration Mechanism. ACS Macro Letters, 2015, 4, 1017-1021.	4.8	46
40	Electropolymerized Polythiophenes Bearing Pendant Nitroxide Radicals. ACS Macro Letters, 2016, 5, 337-341.	4.8	46
41	Corrosion behaviour of eco-friendly airbrushed reduced graphene oxide-poly(vinyl alcohol) coatings. Green Chemistry, 2018, 20, 506-514.	9.0	46
42	Solutionâ€Processable Thermally Crosslinked Organic Radical Polymer Battery Cathodes. ChemSusChem, 2020, 13, 2371-2378.	6.8	46
43	Unusual Internal Electron Transfer in Conjugated Radical Polymers. Angewandte Chemie - International Edition, 2017, 56, 9856-9859.	13.8	45
44	Effects of Particle Size on Mg²⁺ Ion Intercalation into Î»-MnO₂ Cathode Materials. Nano Letters, 2019, 19, 4712-4720.	9.1	41
45	Emerging trends in the dynamics of polyelectrolyte complexes. Physical Chemistry Chemical Physics, 2020, 22, 24157-24177.	2.8	41
46	Electrochemical Energy Storage in Poly(dithieno[3,2-b:2â€²,3â€²-d]pyrrole) Bearing Pendant Nitroxide Radicals. Chemistry of Materials, 2018, 30, 5169-5174.	6.7	40
47	Layer-by-Layer Assembly of Polyaniline Nanofibers and MXene Thin-Film Electrodes for Electrochemical Energy Storage. ACS Applied Materials & Interfaces, 2019, 11, 47929-47938.	8.0	38
48	Aramid nanofiber-reinforced three-dimensional graphene hydrogels for supercapacitor electrodes. Journal of Colloid and Interface Science, 2020, 560, 581-588.	9.4	38
49	One-step hydrothermal synthesis of porous Ti₃C₂T_z MXene/rGO gels for supercapacitor applications. Nanoscale, 2021, 13, 16543-16553.	5.6	36
50	Tannic Acid as a Small-Molecule Binder for Silicon Anodes. ACS Applied Energy Materials, 2020, 3, 6985-6994.	5.1	33
51	Heating of Ti3C2Tx MXene/polymer composites in response to Radio Frequency fields. Scientific Reports, 2019, 9, 16489.	3.3	32
52	Development of Surface Morphology in Multilayered Films Prepared by Layer-by-Layer Deposition Using Poly(acrylic acid) and Hydrophobically Modified Poly(ethylene oxide). Macromolecules, 2007, 40, 4028-4036.	4.8	31
53	Highly Flexible Self-Assembled V2O5 Cathodes Enabled by Conducting Diblock Copolymers. Scientific Reports, 2015, 5, 14166.	3.3	31
54	Polyaniline nanofiber/vanadium pentoxide sprayed layer-by-layer electrodes for energy storage. Journal of Materials Chemistry A, 2014, 2, 14421-14428.	10.3	30

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55	All nanoparticle-based P(MMAâ€“AA)/TiO₂ one-dimensional photonic crystal films with tunable structural colors. Journal of Materials Chemistry C, 2017, 5, 8266-8272.	5.5	30
56	Sprayable, paintable layer-by-layer polyaniline nanofiber/graphene electrodes. RSC Advances, 2015, 5, 14994-15001.	3.6	29
57	Spray-On Polyaniline/Poly(acrylic acid) Electrodes with Enhanced Electrochemical Stability. ACS Applied Materials & Interfaces, 2015, 7, 24150-24158.	8.0	29
58	Interfacial Engineering of Reduced Graphene Oxide for Aramid Nanofiberâ€Enabled Structural Supercapacitors. Batteries and Supercaps, 2019, 2, 464-472.	4.7	29
59	Polymer-clay nanocomposite coatings as efficient, environment-friendly surface pretreatments for aluminum alloy 2024-T3. Electrochimica Acta, 2018, 260, 73-81.	5.2	27
60	Poly(fluorene-alt-naphthalene diimide) as n-Type Polymer Electrodes for Energy Storage. ACS Applied Polymer Materials, 2019, 1, 1155-1164.	4.4	27
61	Conducting Block Copolymer Binders for Carbon-Free Hybrid Vanadium Pentoxide Cathodes with Enhanced Performance. ACS Applied Materials & Interfaces, 2016, 8, 28585-28591.	8.0	26
62	Layer-by-layer nanostructured supercapacitor electrodes consisting of ZnO nanoparticles and multi-walled carbon nanotubes. Journal of Materials Science, 2018, 53, 6719-6728.	3.7	26
63	Effect of Nanorod Aspect Ratio on Shear Thickening Electrolytes for Safety-Enhanced Batteries. ACS Applied Nano Materials, 2018, 1, 2774-2784.	5.0	24
64	pH-Response of polycation/Ti3C2Tx MXene layer-by-layer assemblies for use as resistive sensors. Molecular Systems Design and Engineering, 2020, 5, 366-375.	3.4	24
65	Carbon Nanotube/Reduced Graphene Oxide/Aramid Nanofiber Structural Supercapacitors. ACS Applied Energy Materials, 2020, 3, 11763-11771.	5.1	23
66	Fourier transform infrared spectroscopy investigation of water microenvironments in polyelectrolyte multilayers at varying temperatures. Soft Matter, 2020, 16, 2291-2300.	2.7	22
67	Mechanism and performance relevance of nanomorphogenesis in polyamide films revealed by quantitative 3D imaging and machine learning. Science Advances, 2022, 8, eabk1888.	10.3	22
68	Branched aramid nanofiber-polyaniline electrodes for structural energy storage. Nanoscale, 2020, 12, 16840-16850.	5.6	21
69	Unravelling kinetic and mass transport effects on two-electron storage in radical polymer batteries. Journal of Materials Chemistry A, 2021, 9, 13071-13079.	10.3	21
70	Oxidative Stability of Nb_{n+1}C_nT_z MXenes. Journal of Physical Chemistry C, 2021, 125, 13990-13996.	3.1	21
71	Synthesis and Electronic Applications of Particle-Templated Ti₃C₂T_zMXeneâ€“Polymer Films via Pickering Emulsion Polymerization. ACS Applied Materials & Interfaces, 2021, 13, 51556-51566.	8.0	21
72	Carbon Additive-Free Crumpled Ti₃C₂T_X MXene-Encapsulated Silicon Nanoparticle Anodes for Lithium-Ion Batteries. ACS Applied Energy Materials, 2021, 4, 10762-10773.	5.1	20

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73	Chiral emergence in multistep hierarchical assembly of achiral conjugated polymers. Nature Communications, 2022, 13, 2738.	12.8	20
74	Imaging how thermal capillary waves and anisotropic interfacial stiffness shape nanoparticle supracrystals. Nature Communications, 2020, 11, 4555.	12.8	19
75	Electronic and Optical Property Control of Polycation/MXene Layer-by-Layer Assemblies with Chemically Diverse MXenes. Langmuir, 2021, 37, 11338-11350.	3.5	19
76	Hydrogen-bonded polymer nanocomposites containing discrete layers of gold nanoparticles. Journal of Colloid and Interface Science, 2017, 485, 260-268.	9.4	18
77	A diverse view of science to catalyse change. Nature Chemistry, 2020, 12, 773-776.	13.6	18
78	Minimizing two-dimensional Ti₃C₂T_x MXene nanosheet loading in carbon-free silicon anodes. Nanoscale, 2020, 12, 20699-20709.	5.6	18
79	Structural reduced graphene oxide supercapacitors mechanically enhanced with tannic acid. Sustainable Energy and Fuels, 2020, 4, 2301-2308.	4.9	18
80	Design of multifunctional supercapacitor electrodes using an informatics approach. Molecular Systems Design and Engineering, 2019, 4, 654-663.	3.4	17
81	Nitroxide Radical Polymerâ€“Solvent Interactions and Solubility Parameter Determination. Macromolecules, 2020, 53, 7997-8008.	4.8	17
82	Flocculation of MXenes and Their Use as 2D Particle Surfactants for Capsule Formation. Langmuir, 2021, 37, 2649-2657.	3.5	17
83	Structural Lithium-Ion Battery Cathodes and Anodes Based on Branched Aramid Nanofibers. ACS Applied Materials & Interfaces, 2021, 13, 34807-34817.	8.0	17
84	The Role of Antioxidant Structure in Mitigating Oxidation in Ti₃C₂T_x and Ti₂CT_x MXenes. Advanced Materials Interfaces, 2022, 9, .	3.7	16
85	Unusual Internal Electron Transfer in Conjugated Radical Polymers. Angewandte Chemie, 2017, 129, 9988-9991.	2.0	15
86	Structural batteries take a load off. Science Robotics, 2020, 5, .	17.6	15
87	Lightweight Kevlarâ€Reinforced Graphene Oxide Architectures with High Strength for Energy Storage. Advanced Materials Interfaces, 2019, 6, 1900786.	3.7	14
88	Relaxation Times of Solid-like Polyelectrolyte Complexes of Varying pH and Water Content. Macromolecules, 2021, 54, 7765-7776.	4.8	14
89	Conformal Layer-by-Layer Assembly of Ti₃C₂T_z MXene-Only Thin Films for Optoelectronics and Energy Storage. Chemistry of Materials, 2022, 34, 4884-4895.	6.7	14
90	Crystallization and orientation of isotactic poly(propylene) in cylindrical nanopores. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 1412-1419.	2.1	13

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91	Waterâ€Based Assembly of Polymerâ€“Metal Organic Framework (MOF) Functional Coatings. Advanced Materials Interfaces, 2017, 4, 1600905.	3.7	13
92	Quantifying internal charge transfer and mixed ion-electron transfer in conjugated radical polymers. Chemical Science, 2020, 11, 9962-9970.	7.4	13
93	A Diverse View of Science to Catalyse Change. Journal of the American Chemical Society, 2020, 142, 14393-14396.	13.7	12
94	Promotion of strongly anchored dyes on the surface of titania by tetraethyl orthosilicate treatment for enhanced solar cell performance. Journal of Materials Chemistry A, 2014, 2, 2250-2255.	10.3	11
95	Fabrication and Electrochemical Performance of Structured Mesoscale Open Shell V₂O₅ Networks. Langmuir, 2017, 33, 5975-5981.	3.5	11
96	Spray-On Polymer-Clay Multilayers as a Superior Anticorrosion Metal Pretreatment. Macromolecular Materials and Engineering, 2017, 302, 1600552.	3.6	11
97	Polymerâ”Peptide Conjugates Convert Amyloid into Protein Nanobundles through Fragmentation and Lateral Association. ACS Applied Nano Materials, 2020, 3, 937-945.	5.0	11
98	Effect of Ethanol and Urea as Solvent Additives on PSSâ€“PDADMA Polyelectrolyte Complexation. Macromolecules, 2022, 55, 3140-3150.	4.8	11
99	Micromechanics modeling of the elastic moduli of rGO/ANF nanocomposites. Acta Mechanica, 2019, 230, 265-280.	2.1	10
100	Scalable Synthesis and Multiâ€Electron Transfer of Aniline/Fluorene Copolymer for Solutionâ€Processable Battery Cathodes. Macromolecular Rapid Communications, 2017, 38, 1700067.	3.9	9
101	Comparison of KBr and NaCl effects on the glass transition temperature of hydrated layer-by-layer assemblies. Journal of Chemical Physics, 2018, 149, 163317.	3.0	9
102	Fabrication, characterization and micromechanics modeling of the electrical conductivity of reduced graphene oxide/aramid nanofiber nanocomposites. Smart Materials and Structures, 2019, 28, 094001.	3.5	9
103	Densely Packed Siloxane Barrier for Blocking Electron Recombination in Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 12422-12428.	8.0	8
104	Charting the quantitative relationship between two-dimensional morphology parameters of polyamide membranes and synthesis conditions. Molecular Systems Design and Engineering, 2020, 5, 102-109.	3.4	8
105	Regioregularity and Molecular Weight Effects in Redox-Active Poly(3-hexylthiophene)-block-poly(ethylene oxide) Electrode Binders. ACS Applied Energy Materials, 2018, 1, 5919-5927.	5.1	7
106	Self-Doped Conjugated Polymeric Binders Improve the Capacity and Mechanical Properties of V2O5 Cathodes. Polymers, 2019, 11, 589.	4.5	7
107	Layer-by-Layer Assembly and Electrochemical Study of Alizarin Red S-Based Thin Films. Polymers, 2019, 11, 165.	4.5	7
108	A Diverse View of Science to Catalyse Change. Angewandte Chemie - International Edition, 2020, 59, 18306-18310.	13.8	7

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109	Layer-by-layer assembly of polymers and anisotropic nanomaterials using spray-based approach. Journal of Materials Research, 2020, 35, 1163-1172.	2.6	7
110	Effect of assembly condition on the morphologies and temperature-triggered transformation of layer-by-layer microtubes. Korean Journal of Chemical Engineering, 2018, 35, 263-271.	2.7	5
111	Quantification of Waterâ€“Ion Pair Interactions in Polyelectrolyte Multilayers Using a Quartz Crystal Microbalance Method. ACS Polymers Au, 2022, 2, 287-298.	4.1	5
112	Ionic Effect on Electrochemical Behavior of Water-Soluble Radical Polyelectrolytes. Macromolecules, 2022, 55, 5733-5743.	4.8	5
113	A diverse view of science to catalyse change. Chemical Science, 2020, 11, 9043-9047.	7.4	4
114	Anion Identity and Time Scale Affect the Cation Insertion Energy Storage Mechanism in Ti₃C₂T_x MXene Multilayers. ACS Energy Letters, 2022, 7, 1828-1834.	17.4	4
115	Multifunctional efficiency metric for structural supercapacitors. Multifunctional Materials, 2020, 3, 044002.	3.7	3
116	A Diverse View of Science to Catalyse Change. Angewandte Chemie, 2020, 132, 18462-18466.	2.0	2
117	A diverse view of science to catalyse change. Croatica Chemica Acta, 2020, 93, 77-81.	0.4	2
118	A diverse view of science to catalyse change: valuing diversity leads to scientific excellence, the progress of science and, most importantly, it is simply the right thing to do. We must value diversity not only in words, but also in actions. Canadian Journal of Chemistry, 2020, 98, 597-600.	1.1	2
119	Experimental determination of the compressive piezoresistive response of a free-standing film with application to reduced graphene oxide. Journal of Applied Physics, 2022, 131, .	2.5	2
120	Dye Sensitized Solar Cells Incorporating Polyelectrolyte Multilayer Composites. Materials Research Society Symposia Proceedings, 2004, 836, L1.5.1.	0.1	0
121	Quasi-Solid State Electrolytes Based on Nonionic Surfactant-PEGDME Composites for Dye-Sensitized Solar Cells. Bulletin of the Korean Chemical Society, 2011, 32, 3555-3556.	1.9	0