

# Mansoo Choi

## List of Publications by Year in Descending Order

**Source:** <https://exaly.com/author-pdf/3836707/mansoo-choi-publications-by-year.pdf>

**Version:** 2024-04-24

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

118  
papers

8,574  
citations

35  
h-index

92  
g-index

133  
ext. papers

9,866  
ext. citations

11.6  
avg, IF

6.3  
L-index

#	Paper	IF	Citations
118	Ultrasensitive Near-Infrared Circularly Polarized Light Detection Using 3D Perovskite Embedded with Chiral Plasmonic Nanoparticles.. <i>Advanced Science</i> , <b>2022</b> , e2104598	13.6	3
117	Layer-by-Layer Polydimethylsiloxane Modification Using a Two-Nozzle Spray Process for High Durability of the Cathode Catalyst in Proton-Exchange Membrane Fuel Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 56014-56024	9.5	0
116	Virtually probing Faraday three-dimensional nanoprinting. <i>Additive Manufacturing</i> , <b>2021</b> , 102432	6.1	0
115	Three-dimensional nanoprinting via charged aerosol jets. <i>Nature</i> , <b>2021</b> , 592, 54-59	50.4	30
114	Bioinspired liquid-repelling sealing films for flexible perovskite solar cells. <i>Materials Today Energy</i> , <b>2021</b> , 20, 100622	7	1
113	Abnormal spatial heterogeneity governing the charge-carrier mechanism in efficient Ruddlesden-Popper perovskite solar cells. <i>Energy and Environmental Science</i> , <b>2021</b> , 14, 4915-4925	35.4	7
112	Multifunctional Nafion/CeO Dendritic Structures for Enhanced Durability and Performance of Polymer Electrolyte Membrane Fuel Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 806-815	9.5	14
111	Intact 2D/3D halide junction perovskite solar cells via solid-phase in-plane growth. <i>Nature Energy</i> , <b>2021</b> , 6, 63-71	62.3	155
110	Investigation of Defect-Tolerant Perovskite Solar Cells with Long-Term Stability via Controlling the Self-Doping Effect. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 2100555	21.8	19
109	Hydrophilicity control of laser-induced amorphous carbon-encapsulated carbon nano-onions and their application to proton exchange membrane fuel cells under low humidity. <i>Carbon</i> , <b>2021</b> , 184, 910-922	10.4	0
108	Effects of photon recycling and scattering in high-performance perovskite solar cells.. <i>Science Advances</i> , <b>2021</b> , 7, eabj1363	14.3	1
107	Multiscale structured low-temperature solid oxide fuel cells with 13 W power at 500 °C. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 3459-3468	35.4	15
106	Directionally Selective Polyhalide Molecular Glue for Stable Inverted Perovskite Solar Cells. <i>Solar Rrl</i> , <b>2020</b> , 4, 2000244	7.1	2
105	Highly durable crack sensor integrated with silicone rubber cantilever for measuring cardiac contractility. <i>Nature Communications</i> , <b>2020</b> , 11, 535	17.4	33
104	High-Efficiency Flexible Perovskite Solar Cells Enabled by an Ultrafast Room-Temperature Reactive Ion Etching Process. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 7125-7134	9.5	6
103	Unconventional Alloys Confined in Nanoparticles: Building Blocks for New Matter. <i>Matter</i> , <b>2020</b> , 3, 1646-1663	16.3	23
102	Charge Transport Layer-Dependent Electronic Band Bending in Perovskite Solar Cells and Its Correlation to Light-Induced Device Degradation. <i>ACS Energy Letters</i> , <b>2020</b> , 5, 2580-2589	20.1	22

101	A micro-patterned electrode/electrolyte interface fabricated by soft-lithography for facile oxygen reduction in solid oxide fuel cells. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 16534-16541	13	4
100	Membrane/Electrode Interface Design for Effective Water Management in Alkaline Membrane Fuel Cells. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 34805-34811	9.5	15
99	Three-dimensionally patterned Ag-Pt alloy catalyst on planar Si photocathodes for photoelectrochemical H evolution. <i>Physical Chemistry Chemical Physics</i> , <b>2019</b> , 21, 4184-4192	3.6	9
98	Development of an automated wet-cyclone system for rapid, continuous and enriched bioaerosol sampling and its application to real-time detection. <i>Sensors and Actuators B: Chemical</i> , <b>2019</b> , 284, 525-533	8.5	15
97	High-Performance Solution-Processed Double-Walled Carbon Nanotube Transparent Electrode for Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1901204	21.8	64
96	Degradation of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite materials by localized charges and its polarity dependency. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 12075-12085	13	14
95	An atomistic mechanism for the degradation of perovskite solar cells by trapped charge. <i>Nanoscale</i> , <b>2019</b> , 11, 11369-11378	7.7	32
94	Stretchable and Transparent Kirigami Conductor of Nanowire Percolation Network for Electronic Skin Applications. <i>Nano Letters</i> , <b>2019</b> , 19, 6087-6096	11.5	136
93	Rational Core-Shell Design of Open Air Low Temperature In Situ Processable CsPbI <sub>3</sub> Quasi-Nanocrystals for Stabilized p-i-n Solar Cells. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1901787	21.8	41
92	Multiscale Hierarchical Patterning by Sacrificial Layer-Assisted Creep Lithography. <i>Advanced Materials Interfaces</i> , <b>2019</b> , 6, 1900606	4.6	2
91	Moth-eye Structured Polydimethylsiloxane Films for High-Efficiency Perovskite Solar Cells. <i>Nano-Micro Letters</i> , <b>2019</b> , 11, 53	19.5	24
90	Generation of carbon nano-onions by laser irradiation of gaseous hydrocarbons for high durability catalyst support in proton exchange membrane fuel cells. <i>Journal of Industrial and Engineering Chemistry</i> , <b>2019</b> , 80, 65-73	6.3	6
89	Light emission induced by electric current at room temperature through the defect networks of MgO nanocubes. <i>AIP Advances</i> , <b>2019</b> , 9, 125305	1.5	1
88	Ultra-flexible perovskite solar cells with crumpling durability: toward a wearable power source. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 3182-3191	35.4	78
87	Nature-inspired rollable electronics. <i>NPG Asia Materials</i> , <b>2019</b> , 11,	10.3	5
86	A highly activated and integrated nanoscale interlayer of cathodes in low-temperature solid oxide fuel cells via precursor-solution electro spray method. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 4476-4483	6.7	5
85	Controlled Enhancement in Hole Injection at Gold-Nanoparticle-on-Organic Electrical Contacts Fabricated by Spark-Discharge Aerosol Technique. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 6276-6282	9.5	1
84	Highly Reproducible Large-Area Perovskite Solar Cell Fabrication via Continuous Megasonic Spray Coating of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> . <i>Small</i> , <b>2019</b> , 15, e1804005	11	68

83	Efficient Microfluidic Power Generator Based on Interaction between DI Water and Hydrophobic-Channel Surface. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , <b>2018</b> , 5, 255-260	3.8	7
82	Guided cracking of electrodes by stretching prism-patterned membrane electrode assemblies for high-performance fuel cells. <i>Scientific Reports</i> , <b>2018</b> , 8, 1257	4.9	24
81	Room-Temperature Vapor Deposition of Cobalt Nitride Nanofilms for Mesoscopic and Perovskite Solar Cells. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1703114	21.8	23
80	Carbon-sandwiched perovskite solar cell. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 1382-1389	13	77
79	Polyimide Encapsulation of Spider-Inspired Crack-Based Sensors for Durability Improvement. <i>Applied Sciences (Switzerland)</i> , <b>2018</b> , 8, 367	2.6	24
78	Interface Design of Hybrid Electron Extraction Layer for Relieving Hysteresis and Retarding Charge Recombination in Perovskite Solar Cells. <i>Advanced Materials Interfaces</i> , <b>2018</b> , 5, 1800993	4.6	23
77	Ultra-sensitive Pressure sensor based on guided straight mechanical cracks. <i>Scientific Reports</i> , <b>2017</b> , 7, 40116	4.9	68
76	Precise Morphology Control and Continuous Fabrication of Perovskite Solar Cells Using Droplet-Controllable Electro spray Coating System. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 7879-7884	9.5	33
75	Dual function of a high-contrast hydrophobic/hydrophilic coating for enhanced stability of perovskite solar cells in extremely humid environments. <i>Nano Research</i> , <b>2017</b> , 10, 3885-3895	10	18
74	A rollable ultra-light polymer electrolyte membrane fuel cell. <i>NPG Asia Materials</i> , <b>2017</b> , 9, e384-e384	10.3	17
73	Vertical stacking of three-dimensional nanostructures via an aerosol lithography for advanced optical applications. <i>Nanotechnology</i> , <b>2017</b> , 28, 475302	3.4	3
72	Electrospun Magnetic Nanoparticle-Decorated Nanofiber Filter and Its Applications to High-Efficiency Air Filtration. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 11967-11975	10.3	40
71	Metal/Block copolymer bilayered switches by utilizing the superexponential behavior of crack widening. <i>Journal of Materials Chemistry C</i> , <b>2017</b> , 5, 10920-10925	7.1	13
70	Carbon Nanotubes versus Graphene as Flexible Transparent Electrodes in Inverted Perovskite Solar Cells. <i>Journal of Physical Chemistry Letters</i> , <b>2017</b> , 8, 5395-5401	6.4	107
69	A Low-Field Temperature Dependent EPR Signal in Terraced MgO:Mn <sup>2+</sup> Nanoparticles: An Enhanced Zeeman Splitting in the Wide-Bandgap Oxide. <i>Journal of Spectroscopy</i> , <b>2017</b> , 2017, 1-6	1.5	1
68	Tailoring ceramic membrane structures of solid oxide fuel cells via polymer-assisted electro spray deposition. <i>Journal of Membrane Science</i> , <b>2017</b> , 544, 234-242	9.6	8
67	Assembly of charged aerosols on non-conducting substrates via ion-assisted aerosol lithography (IAAL). <i>Particuology</i> , <b>2017</b> , 33, 17-23	2.8	0
66	Photocurable PUA (Poly Urethaneacrylat) cantilever integrated with ultra-high sensitive crack-based sensor <b>2017</b> ,		1

65	Multifunctional Moth-Eye TiO/PDMS Pads with High Transmittance and UV Filtering. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 44038-44044	9.5	34
64	Crack-based strain sensor with diverse metal films by inserting an inter-layer. <i>RSC Advances</i> , <b>2017</b> , 7, 34810-34815	3.7	27
63	Multifurcation Assembly of Charged Aerosols and Its Application to 3D Structured Gas Sensors. <i>Advanced Materials</i> , <b>2017</b> , 29, 1604159	24	20
62	Superflexible, high-efficiency perovskite solar cells utilizing graphene electrodes: towards future foldable power sources. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 337-345	35.4	307
61	High throughput nanoparticle generation utilizing high-frequency spark discharges via rapid spark plasma removal. <i>Aerosol Science and Technology</i> , <b>2017</b> , 51, 116-122	3.4	7
60	Enhanced Light Harvesting in Mesoscopic Solar Cells by Multilevel Multiscale Patterned Photoelectrodes with Superpositioned Optical Properties. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 6584-6592	15.6	15
59	Self-formed grain boundary healing layer for highly efficient CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cells. <i>Nature Energy</i> , <b>2016</b> , 1,	62.3	757
58	Trapped charge-driven degradation of perovskite solar cells. <i>Nature Communications</i> , <b>2016</b> , 7, 13422	17.4	390
57	High-performance Fuel Cell with Stretched Catalyst-Coated Membrane: One-step Formation of Cracked Electrode. <i>Scientific Reports</i> , <b>2016</b> , 6, 26503	4.9	35
56	Moth-Eye TiO <sub>2</sub> Layer for Improving Light Harvesting Efficiency in Perovskite Solar Cells. <i>Small</i> , <b>2016</b> , 12, 2443-9	11	115
55	A light-trapping strategy for nanocrystalline silicon thin-film solar cells using three-dimensionally assembled nanoparticle structures. <i>Nanotechnology</i> , <b>2016</b> , 27, 055403	3.4	14
54	Facile fabrication of three-dimensional TiO <sub>2</sub> structures for highly efficient perovskite solar cells. <i>Nano Energy</i> , <b>2016</b> , 22, 499-506	17.1	34
53	Perovskite Solar Cells: Moth-Eye TiO <sub>2</sub> Layer for Improving Light Harvesting Efficiency in Perovskite Solar Cells (Small 18/2016). <i>Small</i> , <b>2016</b> , 12, 2530-2530	11	1
52	Transparent Conductive Oxide-Free Graphene-Based Perovskite Solar Cells with over 17% Efficiency. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1501873	21.8	161
51	Hysteresis-free low-temperature-processed planar perovskite solar cells with 19.1% efficiency. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 2262-2266	35.4	232
50	Facile Multiscale Patterning by Creep-Assisted Sequential Imprinting and Fuel Cell Application. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 11459-65	9.5	22
49	Light Harvesting: Enhanced Light Harvesting in Mesoscopic Solar Cells by Multilevel Multiscale Patterned Photoelectrodes with Superpositioned Optical Properties (Adv. Funct. Mater. 36/2016). <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 6583-6583	15.6	2
48	Transparent ITO mechanical crack-based pressure and strain sensor. <i>Journal of Materials Chemistry C</i> , <b>2016</b> , 4, 9947-9953	7.1	68

47	Reliable doping and carrier concentration control in graphene by aerosol-derived metal nanoparticles. <i>Journal of Materials Chemistry C</i> , <b>2015</b> , 3, 8294-8299	7.1	12
46	Highly Reproducible Perovskite Solar Cells with Average Efficiency of 18.3% and Best Efficiency of 19.7% Fabricated via Lewis Base Adduct of Lead(II) Iodide. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 8696-9	16.4	1751
45	Electronic modulation of infrared radiation in graphene plasmonic resonators. <i>Nature Communications</i> , <b>2015</b> , 6, 7032	17.4	161
44	Wire-in-Hole-Type Spark Discharge Generator for Long-Time Consistent Generation of Unagglomerated Nanoparticles. <i>Aerosol Science and Technology</i> , <b>2015</b> , 49, 463-471	3.4	8
43	Multiplex lithography for multilevel multiscale architectures and its application to polymer electrolyte membrane fuel cell. <i>Nature Communications</i> , <b>2015</b> , 6, 8484	17.4	49
42	Electro-spray deposition of a mesoporous TiO <sub>2</sub> charge collection layer: toward large scale and continuous production of high efficiency perovskite solar cells. <i>Nanoscale</i> , <b>2015</b> , 7, 20725-33	7.7	33
41	Control of I-V hysteresis in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite solar cell. <i>Journal of Physical Chemistry Letters</i> , <b>2015</b> , 6, 4633-9	6.4	379
40	Opto-electronic properties of TiO <sub>2</sub> nanohelices with embedded HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 9179-9186	13	60
39	Thermodynamic regulation of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> crystal growth and its effect on photovoltaic performance of perovskite solar cells. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 19901-19906	13	78
38	Comparison of cellular toxicity between multi-walled carbon nanotubes and onion-like shell-shaped carbon nanoparticles. <i>Journal of Nanoparticle Research</i> , <b>2015</b> , 17, 1	2.3	21
37	Nanostructured Material Synthesis in the Gas Phase <b>2014</b> , 291-325		
36	Large-area assembly of three-dimensional nanoparticle structures via ion assisted aerosol lithography with a multi-pin spark discharge generator. <i>Nanotechnology</i> , <b>2014</b> , 25, 225302	3.4	8
35	Hotspot-engineered 3D multipetal flower assemblies for surface-enhanced Raman spectroscopy. <i>Advanced Materials</i> , <b>2014</b> , 26, 5924-9	24	64
34	Replication of flexible polymer membranes with geometry-controllable nano-apertures via a hierarchical mould-based dewetting. <i>Nature Communications</i> , <b>2014</b> , 5, 3137	17.4	47
33	Water-repellent perovskite solar cell. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 20017-20021	13	55
32	Hotspots: Hotspot-Engineered 3D Multipetal Flower Assemblies for Surface-Enhanced Raman Spectroscopy (Adv. Mater. 34/2014). <i>Advanced Materials</i> , <b>2014</b> , 26, 5923-5923	24	3
31	Tunable large resonant absorption in a midinfrared graphene Salisbury screen. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	129
30	Ultrasensitive mechanical crack-based sensor inspired by the spider sensory system. <i>Nature</i> , <b>2014</b> , 516, 222-6	50.4	868

29	Assembly of Nanoparticles: Towards Multiscale Three-Dimensional Architecturing. <i>KONA Powder and Particle Journal</i> , <b>2013</b> , 30, 31-46	3.4	5
28	Crystallinity control of flame generated composite nanoparticles by laser irradiation. <i>Powder Technology</i> , <b>2012</b> , 229, 246-252	5.2	6
27	A study of pin-to-plate type spark discharge generator for producing unagglomerated nanoaerosols. <i>Journal of Aerosol Science</i> , <b>2012</b> , 52, 80-88	4.3	39
26	Nanoxerography utilizing bipolar charge patterns. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 203106	3.4	8
25	Room temperature CO and H <sub>2</sub> sensing with carbon nanoparticles. <i>Nanotechnology</i> , <b>2011</b> , 22, 485501	3.4	31
24	Selective nanopatterning of protein via ion-induced focusing and its application to metal-enhanced fluorescence. <i>Small</i> , <b>2011</b> , 7, 1790-4	11	12
23	Three-dimensional assembly of nanoparticles from charged aerosols. <i>Nano Letters</i> , <b>2011</b> , 11, 119-24	11.5	83
22	High-resolution, parallel patterning of nanoparticles via an ion-induced focusing mask. <i>Small</i> , <b>2010</b> , 6, 2146-52	11	27
21	Focused patterning of nanoparticles by controlling electric field induced particle motion. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 053104	3.4	18
20	One-step flame method for the synthesis of coated composite nanoparticles. <i>Journal of Nanoparticle Research</i> , <b>2009</b> , 11, 1767-1775	2.3	22
19	Auxetic lattice of multipods. <i>Physica Status Solidi (B): Basic Research</i> , <b>2009</b> , 246, 2098-2101	1.3	20
18	Laser induced transition from soot generation to shell shaped carbon nanoparticles in an acetylene flow: aerosol characterization. <i>Journal of Mechanical Science and Technology</i> , <b>2008</b> , 22, 134-140	1.6	1
17	Fabrication of micro patterned fibronectin for studying adhesion and alignment behavior of human dermal fibroblasts. <i>Macromolecular Research</i> , <b>2007</b> , 15, 348-356	1.9	4
16	Numerical simulation of microscopic motion and deposition of nanoparticles via electrodynamic focusing. <i>Journal of Aerosol Science</i> , <b>2007</b> , 38, 1140-1149	4.3	30
15	Parallel patterning of nanoparticles via electrodynamic focusing of charged aerosols. <i>Nature Nanotechnology</i> , <b>2006</b> , 1, 117-21	28.7	138
14	Stabilization of spinel structure during combustion synthesis of iron nanooxides. <i>Journal of Nanoparticle Research</i> , <b>2004</b> , 6, 633-637	2.3	4
13	Nanoparticle pattern deposition from gas phase onto charged flat surface. <i>Microelectronic Engineering</i> , <b>2004</b> , 71, 229-236	2.5	24
12	Electron field emission from nanocarbons: A two-process model. <i>Applied Physics Letters</i> , <b>2004</b> , 84, 1126-1128	3.1	39



11	International Symposium on 'Nanoparticles: Aerosols and Materials,' Pusan, Korea, July 5 <sup>th</sup> , 2001. <i>Journal of Nanoparticle Research</i> , <b>2003</b> , 5, 573-576	2-3	
10	Unipolar Charging of Nanosized Aerosol Particles Using Soft X-ray Photoionization. <i>Aerosol Science and Technology</i> , <b>2003</b> , 37, 330-341	3-4	28
9	Nanofluids containing multiwalled carbon nanotubes and their enhanced thermal conductivities. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 4967	2-5	576
8	Magnetism of adsorbed oxygen at low coverage. <i>Physical Review B</i> , <b>2003</b> , 67,	3-3	6
7	Fragmentation of Fe <sub>2</sub> O <sub>3</sub> nanoparticles driven by a phase transition in a flame and their magnetic properties. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 4842-4844	3-4	18
6	International Symposium on 'Nanoparticles: Technology and Sustainable Development,' Taipei, Taiwan, September 9 <sup>th</sup> 20, 2002. <i>Journal of Nanoparticle Research</i> , <b>2002</b> , 4, 571-573	2-3	
5	Preparation and characterization of SiO <sub>2</sub> /B <sub>2</sub> O <sub>3</sub> /P <sub>2</sub> O <sub>5</sub> particles and films generated by flame hydrolysis deposition for planar light-wave circuits. <i>Journal of Materials Research</i> , <b>2002</b> , 17, 315-322	2-5	4
4	Coalescence enhanced synthesis of nanoparticles to control size, morphology and crystalline phase at high concentrations. <i>Journal of Aerosol Science</i> , <b>2002</b> , 33, 1-16	4-3	55
3	Research in Korea on Gas Phase Synthesis and Control of Nanoparticles. <i>Journal of Nanoparticle Research</i> , <b>2001</b> , 3, 201-211	2-3	9
2	Controlled formation of nanoparticles utilizing laser irradiation in a flame and their characteristics. <i>Applied Physics Letters</i> , <b>2001</b> , 79, 2459-2461	3-4	43
1	Imaging Real-Time Amorphization of Hybrid Perovskite Solar Cells under Electrical Biasing. <i>ACS Energy Letters</i> , 3530-3537	20-1	4