

Gaoshan Huang

List of Publications by Year in Descending Order

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

114
papers

3,491
citations

28
h-index

56
g-index

124
ext. papers

3,967
ext. citations

7.2
avg, IF

5.44
L-index

#	Paper	IF	Citations
114	Area-selective and precise assembly of metal organic framework particles by atomic layer deposition induction and its application for ultra-sensitive dopamine sensor. <i>Nano Today</i> , 2022 , 42, 101347-101349	17.9	2
113	Enhanced Evanescent Field Coupling of Smart Particles in Tubular Optical Microcavity for Sensing Application. <i>Advanced Optical Materials</i> , 2022 , 10, 2102158	8.1	0
112	Integration of a Metal-Organic Framework Film with a Tubular Whispering-Gallery-Mode Microcavity for Effective CO Sensing. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 58104-58113	9.5	0
111	Single Whispering Gallery Mode in Mesh-Structured Tubular Microcavity with Tunable Axial Confinement. <i>Advanced Photonics Research</i> , 2021 , 2, 2000163	1.9	3
110	Micro-Bio-Chemo-Mechanical-Systems: Micromotors, Microfluidics, and Nanozymes for Biomedical Applications. <i>Advanced Materials</i> , 2021 , 33, e2007465	24	12
109	Effects of Voltage and Temperature on Photoelectric Properties of Rolled-Up Quantum Well Nanomembranes. <i>Journal of Electronic Materials</i> , 2021 , 50, 3111-3115	1.9	0
108	Structural Coloration by Internal Reflection and Interference in Hydrogel Microbubbles and Their Precursors. <i>Advanced Optical Materials</i> , 2021 , 9, 2100259	8.1	2
107	Single Whispering Gallery Mode in Mesh-Structured Tubular Microcavity with Tunable Axial Confinement. <i>Advanced Photonics Research</i> , 2021 , 2, 2170014	1.9	
106	Nanostructured WO ₃ /BiVO ₄ heterojunction films embedded with Au nanoparticles for efficient photoelectrochemical water splitting. <i>MRS Communications</i> , 2021 , 11, 295-301	2.7	1
105	Co ₉ S ₈ Nanoparticles for Hydrogen Evolution. <i>ACS Applied Nano Materials</i> , 2021 , 4, 1776-1785	5.6	8
104	Local Cracking-Induced Scalable Flexible Silicon Nanogaps for Dynamically Tunable Surface Enhanced Raman Scattering Substrates. <i>Advanced Materials Interfaces</i> , 2021 , 8, 2100661	4.6	1
103	Atomic layer deposition-assisted fabrication of 3D Co-doped carbon framework for sensitive enzyme-free lactic acid sensor. <i>Chemical Engineering Journal</i> , 2021 , 417, 129285	14.7	10
102	Air-Filled Microbubbles Based on Albumin Functionalized with Gold Nanocages and Zinc Phthalocyanine for Multimodal Imaging. <i>Micromachines</i> , 2021 , 12,	3.3	3
101	Catalytic/magnetic assemblies of rolled-up tubular nanomembrane-based micromotors.. <i>RSC Advances</i> , 2020 , 10, 36526-36530	3.7	0
100	Silicon nanomembrane phototransistor flipped with multifunctional sensors toward smart digital dust. <i>Science Advances</i> , 2020 , 6, eaaz6511	14.3	11
99	Self-rolled TiO ₂ microscroll/graphene composite for electrochemical dopamine sensing. <i>Progress in Natural Science: Materials International</i> , 2020 , 30, 337-342	3.6	8
98	A simple method to fabricate metal-oil micromachines. <i>SN Applied Sciences</i> , 2020 , 2, 1	1.8	3

97	Parameters Optimization of Catalytic Tubular Nanomembrane-Based Oxygen Microbubble Generator. <i>Micromachines</i> , 2020 , 11,	3.3	2
96	Atomic layer deposition-induced integration of N-doped carbon particles on carbon foam for flexible supercapacitor. <i>Journal of Materiomics</i> , 2020 , 6, 209-215	6.7	9
95	Atomic layer deposition synthesized ZnO nanomembranes: A facile route towards stable supercapacitor electrode for high capacitance. <i>Journal of Power Sources</i> , 2020 , 451, 227740	8.9	32
94	Nickel nanograins anchored on a carbon framework for an efficient hydrogen evolution electrocatalyst and a flexible electrode. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 3499-3508	13	13
93	Strongly polarized quantum well infrared photodetector with metallic cavity for narrowband wavelength selective detection. <i>Applied Physics Letters</i> , 2020 , 116, 161107	3.4	7
92	Atomic layer deposited nanostructures and their applications in energy storage and sensing. <i>Journal of Materials Research</i> , 2020 , 35, 701-719	2.5	16
91	Hydrogel microcapsules with photocatalytic nanoparticles for removal of organic pollutants. <i>Environmental Science: Nano</i> , 2020 , 7, 656-664	7.1	27
90	Atomic Layer Deposition-Derived Nanomaterials: Oxides, Transition Metal Dichalcogenides, and Metal-Organic Frameworks. <i>Chemistry of Materials</i> , 2020 , 32, 9056-9077	9.6	9
89	Sonication-Triggered Rolling of Janus Porous Nanomembranes for Electrochemical Sensing of Dopamine and Ascorbic Acid. <i>ACS Applied Nano Materials</i> , 2020 , 3, 10032-10039	5.6	10
88	Growth and stress analyses of vanadium dioxide nanomembranes for controllable rolling. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 455105	3	0
87	Oxide nanomembrane induced assembly of a functional smart fiber composite with nanoporosity for an ultra-sensitive flexible glucose sensor. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 26119-26129	13	11
86	Sponge-templated production of ultra-thin ZnO nanosheets for printed ultraviolet photodetectors. <i>Applied Physics Letters</i> , 2019 , 115, 122106	3.4	4
85	Strain-modulated photoelectric properties of self-rolled GaAs/Al _{0.26} Ga _{0.74} As quantum well nanomembrane. <i>Applied Physics Express</i> , 2019 , 12, 065003	2.4	4
84	Oxygen Microbubble Generator Enabled by Tunable Catalytic Microtubes. <i>Chemistry - an Asian Journal</i> , 2019 , 14, 2431-2434	4.5	5
83	Thermal-controlled releasing and assembling of functional nanomembranes through polymer pyrolysis. <i>Nanotechnology</i> , 2019 , 30, 354001	3.4	6
82	Rolled-Up Monolayer Graphene Tubular Micromotors: Enhanced Performance and Antibacterial Property. <i>Chemistry - an Asian Journal</i> , 2019 , 14, 2479-2484	4.5	13
81	Tubular catalytic micromotors in transition from unidirectional bubble sequences to more complex bidirectional motion. <i>Applied Physics Letters</i> , 2019 , 114, 033701	3.4	14
80	Silicon nanomembrane-based near infrared phototransistor with positive and negative photodetections. <i>Nanoscale</i> , 2019 , 11, 16844-16851	7.7	6

79	Ultrathin Silicon Nanomembrane in a Tubular Geometry for Enhanced Photodetection. <i>Advanced Optical Materials</i> , 2019 , 7, 1900823	8.1	5
78	Energy band modulation of GaAs/Al _{0.26} Ga _{0.74} As quantum well in 3D self-assembled nanomembranes. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2019 , 383, 2938-2942 ²⁻³		1
77	TiO Nanomembranes Fabricated by Atomic Layer Deposition for Supercapacitor Electrode with Enhanced Capacitance. <i>Nanoscale Research Letters</i> , 2019 , 14, 92	5	19
76	Cycling-Induced Capacity Increase of Graphene Aerogel/ZnO Nanomembrane Composite Anode Fabricated by Atomic Layer Deposition. <i>Nanoscale Research Letters</i> , 2019 , 14, 69	5	7
75	Atomic Layer Deposition Inducing Integration of Co, N Codoped Carbon Sphere on 3D Foam with Hierarchically Porous Structures for Flexible Hydrogen Producing Device. <i>Advanced Functional Materials</i> , 2019 , 29, 1906365	15.6	21
74	2D-material-integrated whispering-gallery-mode microcavity. <i>Photonics Research</i> , 2019 , 7, 905	6	15
73	Hydrogel micromotors with catalyst-containing liquid core and shell. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 214004	1.8	19
72	Light-controlled two-dimensional TiO plate micromotors.. <i>RSC Advances</i> , 2019 , 9, 29433-29439	3.7	7
71	Novel Flexible Material-Based Unobtrusive and Wearable Body Sensor Networks for Vital Sign Monitoring. <i>IEEE Sensors Journal</i> , 2019 , 19, 8502-8513	4	17
70	Excitation Position Sensitive Upconversion Emission of Lanthanide Ions Doped [NaYF ₄ Single Microcrystals. <i>ChemNanoMat</i> , 2018 , 4, 348-352	3.5	2
69	Assembly and Self-Assembly of Nanomembrane Materials-From 2D to 3D. <i>Small</i> , 2018 , 14, e1703665	11	40
68	Tubular Micro/Nanomachines: From the Basics to Recent Advances. <i>Advanced Functional Materials</i> , 2018 , 28, 1705872	15.6	80
67	Carbon dioxide bubble-propelled microengines in carbonated water and beverages. <i>Chemical Communications</i> , 2018 , 54, 5692-5695	5.8	9
66	Three-dimensional carbon/ZnO nanomembrane foam as an anode for lithium-ion battery with long-life and high areal capacity. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 7227-7235	13	48
65	Infrared tubular microcavity based on rolled-up GeSn/Ge nanomembranes. <i>Nanotechnology</i> , 2018 , 29, 42LT02	3.4	6
64	Multifunctional Nanocracks in Silicon Nanomembranes by Notch-Assisted Transfer Printing. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 25644-25651	9.5	7
63	Geometry Design, Principles and Assembly of Micromotors. <i>Micromachines</i> , 2018 , 9,	3.3	41
62	Rolled-up Nanotechnology: Materials Issue and Geometry Capability. <i>Advanced Materials Technologies</i> , 2018 , 4, 1800486	6.8	15

61	Sandwiched porous C/ZnO/porous C nanosheet battery anodes with a stable solid-electrolyte interphase for fast and long cycling. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 22870-22878	13	22
60	Schottky Barrier Modulation in Surface Nanoroughened Silicon Nanomembranes for High-Performance Optoelectronics. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 41497-41503	9.5	3
59	Transient Electronics: High-Temperature-Triggered Thermally Degradable Electronics Based on Flexible Silicon Nanomembranes (Adv. Funct. Mater. 45/2018). <i>Advanced Functional Materials</i> , 2018 , 28, 1870323	15.6	1
58	Flexible Transient Phototransistors by Use of Wafer-Compatible Transferred Silicon Nanomembranes. <i>Small</i> , 2018 , 14, e1802985	11	10
57	High-Temperature-Triggered Thermally Degradable Electronics Based on Flexible Silicon Nanomembranes. <i>Advanced Functional Materials</i> , 2018 , 28, 1801448	15.6	22
56	Electromagnetic wave propagation in a rolled-up tubular microcavity. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 2758-2770	7.1	16
55	Strain effect on intersubband transitions in rolled-up quantum well infrared photodetectors. <i>Journal of Semiconductors</i> , 2017 , 38, 054006	2.3	4
54	Bendable Photodetector on Fibers Wrapped with Flexible Ultrathin Single Crystalline Silicon Nanomembranes. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 12171-12175	9.5	27
53	Exceptional transport property in a rolled-up germanium tube. <i>Applied Physics Letters</i> , 2017 , 110, 112104	3.4	10
52	Influence of reactive surface groups on the deposition of oxides thin film by atomic layer deposition. <i>Surface and Coatings Technology</i> , 2017 , 329, 149-154	4.4	8
51	Self-assembled dielectric microsphere as light concentrators for ultrathin-silicon-based photodetectors with broadband enhancement. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017 , 214, 1700295	1.6	4
50	ZnO Nanomembrane/Expanded Graphite Composite Synthesized by Atomic Layer Deposition as Binder-Free Anode for Lithium Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 38522-38529	9.5	44
49	Rocket-inspired tubular catalytic microjets with grating-structured walls as guiding empennages. <i>Nanoscale</i> , 2017 , 9, 18590-18596	7.7	10
48	Wrinkled Single-Crystalline Germanium Nanomembranes for Stretchable Photodetectors. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 1985-1990	2.9	16
47	Mechanical Self-Assembly of a Strain-Engineered Flexible Layer: Wrinkling, Rolling, and Twisting. <i>Physical Review Applied</i> , 2016 , 5,	4.3	85
46	Self-rolling and light-trapping in flexible quantum well-embedded nanomembranes for wide-angle infrared photodetectors. <i>Science Advances</i> , 2016 , 2, e1600027	14.3	52
45	Self-Rolling of Oxide Nanomembranes and Resonance Coupling in Tubular Optical Microcavity. <i>Advanced Optical Materials</i> , 2016 , 4, 936-942	8.1	30
44	Atomic Layer Deposition of Pt Nanoparticles for Microengine with Promoted Catalytic Motion. <i>Nanoscale Research Letters</i> , 2016 , 11, 289	5	11

43	Nanogranular SiO ₂ proton gated silicon layer transistor mimicking biological synapses. <i>Applied Physics Letters</i> , 2016 , 108, 253503	3.4	10
42	Atomic layer deposition of TiO ₂ -nanomembrane-based photocatalysts with enhanced performance. <i>AIP Advances</i> , 2016 , 6, 115113	1.5	8
41	Automatic molecular collection and detection by using fuel-powered microengines. <i>Nanoscale</i> , 2016 , 8, 9141-5	7.7	22
40	Rolled-Up Ag-SiO _x Hyperbolic Metamaterials for Surface-Enhanced Raman Scattering. <i>Plasmonics</i> , 2015 , 10, 949-954	2.4	11
39	Uniaxial and tensile strained germanium nanomembranes in rolled-up geometry by polarized Raman scattering spectroscopy. <i>AIP Advances</i> , 2015 , 5, 037115	1.5	14
38	Highly photocatalytic TiO ₂ interconnected porous powder fabricated by sponge-templated atomic layer deposition. <i>Nanotechnology</i> , 2015 , 26, 364001	3.4	18
37	Whispering-gallery nanocavity plasmon-enhanced Raman spectroscopy. <i>Scientific Reports</i> , 2015 , 5, 15012	4.9	34
36	Helices in micro-world: Materials, properties, and applications. <i>Journal of Materiomics</i> , 2015 , 1, 296-306	6.7	17
35	Deterministic Assembly of Flexible Si/Ge Nanoribbons via Edge-Cutting Transfer and Printing for van der Waals Heterojunctions. <i>Small</i> , 2015 , 11, 4140-8	11	14
34	Schottky contact on ultra-thin silicon nanomembranes under light illumination. <i>Nanotechnology</i> , 2014 , 25, 485201	3.4	9
33	Atmospheric growth and strong visible luminescence of anatase titanium oxide films with various orientations. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 6708-6713	13	6
32	Roll up polymer/oxide/polymer nanomembranes as a hybrid optical microcavity for humidity sensing. <i>Nanoscale</i> , 2014 , 6, 13646-50	7.7	42
31	Hierarchical nanoporous microtubes for high-speed catalytic microengines. <i>NPG Asia Materials</i> , 2014 , 6, e94-e94	10.3	38
30	Grating-structured metallic microsprings. <i>Nanoscale</i> , 2014 , 6, 9428-35	7.7	16
29	Modification and Resonance Tuning of Optical Microcavities by Atomic Layer Deposition. <i>Chemical Vapor Deposition</i> , 2014 , 20, 103-111		6
28	Optical microcavities with tubular geometry: properties and applications. <i>Laser and Photonics Reviews</i> , 2014 , 8, 521-547	8.3	82
27	Light-emitting properties of a strain-tuned microtube containing coupled quantum wells. <i>Applied Physics Letters</i> , 2013 , 102, 041109	3.4	11
26	Dry-released nanotubes and nanoengines by particle-assisted rolling. <i>Advanced Materials</i> , 2013 , 25, 3715-21	2.1	71

25	Small-scale heat detection using catalytic microengines irradiated by laser. <i>Nanoscale</i> , 2013 , 5, 1345-52	7.7	26
24	Three dimensional strain distribution of wrinkled silicon nanomembranes fabricated by rolling-transfer technique. <i>Applied Physics Letters</i> , 2013 , 103, 264102	3.4	14
23	Liquid sensing capability of rolled-up tubular optical microcavities: a theoretical study. <i>Lab on A Chip</i> , 2012 , 12, 3798-802	7.2	17
22	Material considerations and locomotive capability in catalytic tubular microengines. <i>Journal of Materials Chemistry</i> , 2012 , 22, 6519		56
21	Fabrication and stimuli-responsive behavior of flexible micro-scrolls. <i>Soft Matter</i> , 2012 , 8, 7103	3.6	25
20	Exploring Rolled-up AuAg Bimetallic Microtubes for Surface-Enhanced Raman Scattering Sensor. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 25504-25508	3.8	21
19	Thinning and functionalization of few-layer graphene sheets by CF ₄ plasma treatment. <i>Nanoscale Research Letters</i> , 2012 , 7, 268	5	20
18	Dynamic curvature control of rolled-up metal nanomembranes activated by magnesium. <i>Journal of Materials Chemistry</i> , 2012 , 22, 12983		5
17	Superelastic metal microsprings as fluidic sensors and actuators. <i>Lab on A Chip</i> , 2012 , 12, 2322-8	7.2	36
16	Rolling up graphene oxide sheets into micro/nanoscrolls by nanoparticle aggregation. <i>Journal of Materials Chemistry</i> , 2012 , 22, 17441		63
15	Thinning and shaping solid films into functional and integrative nanomembranes. <i>Advanced Materials</i> , 2012 , 24, 2517-46	24	94
14	Tubular oxide microcavity with high-index-contrast walls: Mie scattering theory and 3D confinement of resonant modes. <i>Optics Express</i> , 2012 , 20, 18555-67	3.3	36
13	Origin of the high p-doping in F intercalated graphene on SiC. <i>Applied Physics Letters</i> , 2011 , 99, 053117	3.4	28
12	Study of roughness evolution and layer stacking faults in short-period atomic layer deposited HfO ₂ /Al ₂ O ₃ multilayers. <i>Journal of Applied Physics</i> , 2011 , 109, 063524	2.5	6
11	Dynamics of catalytic tubular microjet engines: dependence on geometry and chemical environment. <i>Nanoscale</i> , 2011 , 3, 5083-9	7.7	93
10	Grüneisen parameter of the G mode of strained monolayer graphene. <i>Physical Review B</i> , 2011 , 83,	3.3	68
9	Optical resonances in tubular microcavities with subwavelength wall thicknesses. <i>Applied Physics Letters</i> , 2011 , 99, 211104	3.4	16
8	Rolled-up optical microcavities with subwavelength wall thicknesses for enhanced liquid sensing applications. <i>ACS Nano</i> , 2010 , 4, 3123-30	16.7	88

7	Morphological Differentiation of Neurons on Microtopographic Substrates Fabricated by Rolled-Up Nanotechnology. <i>Advanced Engineering Materials</i> , 2010 , 12, B558-B564	3.5	47
6	Local-illuminated ultrathin silicon nanomembranes with photovoltaic effect and negative transconductance. <i>Advanced Materials</i> , 2010 , 22, 3667-71	24	15
5	Catalytic microtubular jet engines self-propelled by accumulated gas bubbles. <i>Small</i> , 2009 , 5, 1688-92	11	548
4	Optical properties of rolled-up tubular microcavities from shaped nanomembranes. <i>Applied Physics Letters</i> , 2009 , 94, 141901	3.4	53
3	Rolled-up transparent microtubes as two-dimensionally confined culture scaffolds of individual yeast cells. <i>Lab on A Chip</i> , 2009 , 9, 263-8	7.2	116
2	Giant persistent photoconductivity in rough silicon nanomembranes. <i>Nano Letters</i> , 2009 , 9, 3453-9	11.5	47
1	Versatile Approach for Integrative and Functionalized Tubes by Strain Engineering of Nanomembranes on Polymers. <i>Advanced Materials</i> , 2008 , 20, 4085-4090	24	537