Gaoshan Huang

List of Publications by Citations

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	Catalytic microtubular jet engines self-propelled by accumulated gas bubbles. *Small*, **2009**, 5, 1688-92	11	548
113	Versatile Approach for Integrative and Functionalized Tubes by Strain Engineering of Nanomembranes on Polymers. *Advanced Materials*, **2008**, 20, 4085-4090	24	537
112	Rolled-up transparent microtubes as two-dimensionally confined culture scaffolds of individual yeast cells. *Lab on A Chip*, **2009**, 9, 263-8	7.2	116
111	Thinning and shaping solid films into functional and integrative nanomembranes. *Advanced Materials*, **2012**, 24, 2517-46	24	94
110	Dynamics of catalytic tubular microjet engines: dependence on geometry and chemical environment. *Nanoscale*, **2011**, 3, 5083-9	7.7	93
109	Rolled-up optical microcavities with subwavelength wall thicknesses for enhanced liquid sensing applications. *ACS Nano*, **2010**, 4, 3123-30	16.7	88
108	Mechanical Self-Assembly of a Strain-Engineered Flexible Layer: Wrinkling, Rolling, and Twisting. *Physical Review Applied*, **2016**, 5,	4.3	85
107	Optical microcavities with tubular geometry: properties and applications. *Laser and Photonics Reviews*, **2014**, 8, 521-547	8.3	82
106	Tubular Micro/Nanomachines: From the Basics to Recent Advances. *Advanced Functional Materials*, **2018**, 28, 1705872	15.6	80
105	Dry-released nanotubes and nanoengines by particle-assisted rolling. *Advanced Materials*, **2013**, 25, 3715-21	24	71
104	Grüneisen parameter of the G mode of strained monolayer graphene. *Physical Review B*, **2011**, 83,	3.3	68
103	Rolling up graphene oxide sheets into micro/nanoscrolls by nanoparticle aggregation. *Journal of Materials Chemistry*, **2012**, 22, 17441		63
102	Material considerations and locomotive capability in catalytic tubular microengines. *Journal of Materials Chemistry*, **2012**, 22, 6519		56
101	Optical properties of rolled-up tubular microcavities from shaped nanomembranes. *Applied Physics Letters*, **2009**, 94, 141901	3.4	53
100	Self-rolling and light-trapping in flexible quantum well-embedded nanomembranes for wide-angle infrared photodetectors. *Science Advances*, **2016**, 2, e1600027	14.3	52
99	Three-dimensional carbon/ZnO nanomembrane foam as an anode for lithium-ion battery with long-life and high areal capacity. *Journal of Materials Chemistry A*, **2018**, 6, 7227-7235	13	48
98	Giant persistent photoconductivity in rough silicon nanomembranes. *Nano Letters*, **2009**, 9, 3453-9	11.5	47

97	Morphological Differentiation of Neurons on Microtopographic Substrates Fabricated by Rolled-Up Nanotechnology. *Advanced Engineering Materials*, **2010**, 12, B558-B564	3.5	47
96	ZnO Nanomembrane/Expanded Graphite Composite Synthesized by Atomic Layer Deposition as Binder-Free Anode for Lithium Ion Batteries. *ACS Applied Materials & Interfaces*, **2017**, 9, 38522-38529	9.5	44
95	Roll up polymer/oxide/polymer nanomembranes as a hybrid optical microcavity for humidity sensing. *Nanoscale*, **2014**, 6, 13646-50	7.7	42
94	Geometry Design, Principles and Assembly of Micromotors. *Micromachines*, **2018**, 9,	3.3	41
93	Assembly and Self-Assembly of Nanomembrane Materials-From 2D to 3D. *Small*, **2018**, 14, e1703665	11	40
92	Hierarchical nanoporous microtubes for high-speed catalytic microengines. *NPG Asia Materials*, **2014**, 6, e94-e94	10.3	38
91	Superelastic metal microsprings as fluidic sensors and actuators. *Lab on A Chip*, **2012**, 12, 2322-8	7.2	36
90	Tubular oxide microcavity with high-index-contrast walls: Mie scattering theory and 3D confinement of resonant modes. *Optics Express*, **2012**, 20, 18555-67	3.3	36
89	Whispering-gallery nanocavity plasmon-enhanced Raman spectroscopy. *Scientific Reports*, **2015**, 5, 15012	4.9	34
88	Atomic layer deposition synthesized ZnO nanomembranes: A facile route towards stable supercapacitor electrode for high capacitance. *Journal of Power Sources*, **2020**, 451, 227740	8.9	32
87	Self-Rolling of Oxide Nanomembranes and Resonance Coupling in Tubular Optical Microcavity. *Advanced Optical Materials*, **2016**, 4, 936-942	8.1	30
86	Origin of the high p-doping in F intercalated graphene on SiC. *Applied Physics Letters*, **2011**, 99, 053117	3.4	28
85	Bendable Photodetector on Fibers Wrapped with Flexible Ultrathin Single Crystalline Silicon Nanomembranes. *ACS Applied Materials & Interfaces*, **2017**, 9, 12171-12175	9.5	27
84	Hydrogel microcapsules with photocatalytic nanoparticles for removal of organic pollutants. *Environmental Science: Nano*, **2020**, 7, 656-664	7.1	27
83	Small-scale heat detection using catalytic microengines irradiated by laser. *Nanoscale*, **2013**, 5, 1345-52	7.7	26
82	Fabrication and stimuli-responsive behavior of flexible micro-scrolls. *Soft Matter*, **2012**, 8, 7103	3.6	25
81	Automatic molecular collection and detection by using fuel-powered microengines. *Nanoscale*, **2016**, 8, 9141-5	7.7	22
80	Sandwiched porous C/ZnO/porous C nanosheet battery anodes with a stable solid-electrolyte interphase for fast and long cycling. *Journal of Materials Chemistry A*, **2018**, 6, 22870-22878	13	22

79	High-Temperature-Triggered Thermally Degradable Electronics Based on Flexible Silicon Nanomembranes. *Advanced Functional Materials*, **2018**, 28, 1801448	15.6	22
78	Atomic Layer Deposition Inducing Integration of Co, N Codoped Carbon Sphere on 3D Foam with Hierarchically Porous Structures for Flexible Hydrogen Producing Device. *Advanced Functional Materials*, **2019**, 29, 1906365	15.6	21
77	Exploring Rolled-up Au/Ag Bimetallic Microtubes for Surface-Enhanced Raman Scattering Sensor. *Journal of Physical Chemistry C*, **2012**, 116, 25504-25508	3.8	21
76	Thinning and functionalization of few-layer graphene sheets by CF4 plasma treatment. *Nanoscale Research Letters*, **2012**, 7, 268	5	20
75	TiO Nanomembranes Fabricated by Atomic Layer Deposition for Supercapacitor Electrode with Enhanced Capacitance. *Nanoscale Research Letters*, **2019**, 14, 92	5	19
74	Hydrogel micromotors with catalyst-containing liquid core and shell. *Journal of Physics Condensed Matter*, **2019**, 31, 214004	1.8	19
73	Highly photocatalytic TiO2 interconnected porous powder fabricated by sponge-templated atomic layer deposition. *Nanotechnology*, **2015**, 26, 364001	3.4	18
72	Helices in micro-world: Materials, properties, and applications. *Journal of Materiomics*, **2015**, 1, 296-306	6.7	17
71	Liquid sensing capability of rolled-up tubular optical microcavities: a theoretical study. *Lab on A Chip*, **2012**, 12, 3798-802	7.2	17
70	Novel Flexible Material-Based Unobtrusive and Wearable Body Sensor Networks for Vital Sign Monitoring. *IEEE Sensors Journal*, **2019**, 19, 8502-8513	4	17
69	Electromagnetic wave propagation in a rolled-up tubular microcavity. *Journal of Materials Chemistry C*, **2017**, 5, 2758-2770	7.1	16
68	Grating-structured metallic microsprings. *Nanoscale*, **2014**, 6, 9428-35	7.7	16
67	Wrinkled Single-Crystalline Germanium Nanomembranes for Stretchable Photodetectors. *IEEE Transactions on Electron Devices*, **2017**, 64, 1985-1990	2.9	16
66	Optical resonances in tubular microcavities with subwavelength wall thicknesses. *Applied Physics Letters*, **2011**, 99, 211104	3.4	16
65	Atomic layer deposited nanostructures and their applications in energy storage and sensing. *Journal of Materials Research*, **2020**, 35, 701-719	2.5	16
64	Local-illuminated ultrathin silicon nanomembranes with photovoltaic effect and negative transconductance. *Advanced Materials*, **2010**, 22, 3667-71	24	15
63	2D-material-integrated whispering-gallery-mode microcavity. *Photonics Research*, **2019**, 7, 905	6	15
62	Rolled-up Nanotechnology: Materials Issue and Geometry Capability. *Advanced Materials Technologies*, **2018**, 4, 1800486	6.8	15

61	Tubular catalytic micromotors in transition from unidirectional bubble sequences to more complex bidirectional motion. *Applied Physics Letters*, **2019**, 114, 033701	3.4	14
60	Uniaxial and tensile strained germanium nanomembranes in rolled-up geometry by polarized Raman scattering spectroscopy. *AIP Advances*, **2015**, 5, 037115	1.5	14
59	Deterministic Assembly of Flexible Si/Ge Nanoribbons via Edge-Cutting Transfer and Printing for van der Waals Heterojunctions. *Small*, **2015**, 11, 4140-8	11	14
58	Three dimensional strain distribution of wrinkled silicon nanomembranes fabricated by rolling-transfer technique. *Applied Physics Letters*, **2013**, 103, 264102	3.4	14
57	Rolled-Up Monolayer Graphene Tubular Micromotors: Enhanced Performance and Antibacterial Property. *Chemistry - an Asian Journal*, **2019**, 14, 2479-2484	4.5	13
56	Nickel nanograins anchored on a carbon framework for an efficient hydrogen evolution electrocatalyst and a flexible electrode. *Journal of Materials Chemistry A*, **2020**, 8, 3499-3508	13	13
55	Micro-Bio-Chemo-Mechanical-Systems: Micromotors, Microfluidics, and Nanozymes for Biomedical Applications. *Advanced Materials*, **2021**, 33, e2007465	24	12
54	Rolled-Up Ag-SiOx Hyperbolic Metamaterials for Surface-Enhanced Raman Scattering. *Plasmonics*, **2015**, 10, 949-954	2.4	11
53	Silicon nanomembrane phototransistor flipped with multifunctional sensors toward smart digital dust. *Science Advances*, **2020**, 6, eaaz6511	14.3	11
52	Atomic Layer Deposition of Pt Nanoparticles for Microengine with Promoted Catalytic Motion. *Nanoscale Research Letters*, **2016**, 11, 289	5	11
51	Light-emitting properties of a strain-tuned microtube containing coupled quantum wells. *Applied Physics Letters*, **2013**, 102, 041109	3.4	11
50	Oxide nanomembrane induced assembly of a functional smart fiber composite with nanoporosity for an ultra-sensitive flexible glucose sensor. *Journal of Materials Chemistry A*, **2020**, 8, 26119-26129	13	11
49	Exceptional transport property in a rolled-up germanium tube. *Applied Physics Letters*, **2017**, 110, 112104	3.4	10
48	Rocket-inspired tubular catalytic microjets with grating-structured walls as guiding empennages. *Nanoscale*, **2017**, 9, 18590-18596	7.7	10
47	Sonication-Triggered Rolling of Janus Porous Nanomembranes for Electrochemical Sensing of Dopamine and Ascorbic Acid. *ACS Applied Nano Materials*, **2020**, 3, 10032-10039	5.6	10
46	Nanogranular SiO2 proton gated silicon layer transistor mimicking biological synapses. *Applied Physics Letters*, **2016**, 108, 253503	3.4	10
45	Flexible Transient Phototransistors by Use of Wafer-Compatible Transferred Silicon Nanomembranes. *Small*, **2018**, 14, e1802985	11	10
44	Atomic layer deposition-assisted fabrication of 3D Co-doped carbon framework for sensitive enzyme-free lactic acid sensor. *Chemical Engineering Journal*, **2021**, 417, 129285	14.7	10

43	Atomic layer deposition-induced integration of N-doped carbon particles on carbon foam for flexible supercapacitor. *Journal of Materiomics*, **2020**, 6, 209-215	6.7	9
42	Carbon dioxide bubble-propelled microengines in carbonated water and beverages. *Chemical Communications*, **2018**, 54, 5692-5695	5.8	9
41	Schottky contact on ultra-thin silicon nanomembranes under light illumination. *Nanotechnology*, **2014**, 25, 485201	3.4	9
40	Atomic Layer Deposition-Derived Nanomaterials: Oxides, Transition Metal Dichalcogenides, and Metal□rganic Frameworks. *Chemistry of Materials*, **2020**, 32, 9056-9077	9.6	9
39	Influence of reactive surface groups on the deposition of oxides thin film by atomic layer deposition. *Surface and Coatings Technology*, **2017**, 329, 149-154	4.4	8
38	Self-rolled TiO2 microscroll/graphene composite for electrochemical dopamine sensing. *Progress in Natural Science: Materials International*, **2020**, 30, 337-342	3.6	8
37	Atomic layer deposition of TiO2-nanomembrane-based photocatalysts with enhanced performance. *AIP Advances*, **2016**, 6, 115113	1.5	8
36	Co9S8 Nanoparticles for Hydrogen Evolution. *ACS Applied Nano Materials*, **2021**, 4, 1776-1785	5.6	8
35	Multifunctional Nanocracks in Silicon Nanomembranes by Notch-Assisted Transfer Printing. *ACS Applied Materials & Interfaces*, **2018**, 10, 25644-25651	9.5	7
34	Cycling-Induced Capacity Increase of Graphene Aerogel/ZnO Nanomembrane Composite Anode Fabricated by Atomic Layer Deposition. *Nanoscale Research Letters*, **2019**, 14, 69	5	7
33	Strongly polarized quantum well infrared photodetector with metallic cavity for narrowband wavelength selective detection. *Applied Physics Letters*, **2020**, 116, 161107	3.4	7
32	Light-controlled two-dimensional TiO plate micromotors.. *RSC Advances*, **2019**, 9, 29433-29439	3.7	7
31	Thermal-controlled releasing and assembling of functional nanomembranes through polymer pyrolysis. *Nanotechnology*, **2019**, 30, 354001	3.4	6
30	Infrared tubular microcavity based on rolled-up GeSn/Ge nanomembranes. *Nanotechnology*, **2018**, 29, 42LT02	3.4	6
29	Silicon nanomembrane-based near infrared phototransistor with positive and negative photodetections. *Nanoscale*, **2019**, 11, 16844-16851	7.7	6
28	Atmospheric growth and strong visible luminescence of anatase titanium oxide films with various orientations. *Journal of Materials Chemistry A*, **2014**, 2, 6708-6713	13	6
27	Modification and Resonance Tuning of Optical Microcavities by Atomic Layer Deposition. *Chemical Vapor Deposition*, **2014**, 20, 103-111		6
26	Study of roughness evolution and layer stacking faults in short-period atomic layer deposited HfO2/Al2O3 multilayers. *Journal of Applied Physics*, **2011**, 109, 063524	2.5	6

25	Oxygen Microbubble Generator Enabled by Tunable Catalytic Microtubes. *Chemistry - an Asian Journal*, **2019**, 14, 2431-2434	4.5	5
24	Ultrathin Silicon Nanomembrane in a Tubular Geometry for Enhanced Photodetection. *Advanced Optical Materials*, **2019**, 7, 1900823	8.1	5
23	Dynamic curvature control of rolled-up metal nanomembranes activated by magnesium. *Journal of Materials Chemistry*, **2012**, 22, 12983		5
22	Strain effect on intersubband transitions in rolled-up quantum well infrared photodetectors. *Journal of Semiconductors*, **2017**, 38, 054006	2.3	4
21	Self-assembled dielectric microsphere as light concentrators for ultrathin-silicon-based photodetectors with broadband enhancement. *Physica Status Solidi (A) Applications and Materials Science*, **2017**, 214, 1700295	1.6	4
20	Sponge-templated production of ultra-thin ZnO nanosheets for printed ultraviolet photodetectors. *Applied Physics Letters*, **2019**, 115, 122106	3.4	4
19	Strain-modulated photoelectric properties of self-rolled GaAs/Al0.26Ga0.74As quantum well nanomembrane. *Applied Physics Express*, **2019**, 12, 065003	2.4	4
18	A simple method to fabricate metal-oil micromachines. *SN Applied Sciences*, **2020**, 2, 1	1.8	3
17	Single Whispering Gallery Mode in Mesh-Structured Tubular Microcavity with Tunable Axial Confinement. *Advanced Photonics Research*, **2021**, 2, 2000163	1.9	3
16	Schottky Barrier Modulation in Surface Nanoroughened Silicon Nanomembranes for High-Performance Optoelectronics. *ACS Applied Materials & Interfaces*, **2018**, 10, 41497-41503	9.5	3
15	Air-Filled Microbubbles Based on Albumin Functionalized with Gold Nanocages and Zinc Phthalocyanine for Multimodal Imaging. *Micromachines*, **2021**, 12,	3.3	3
14	Parameters Optimization of Catalytic Tubular Nanomembrane-Based Oxygen Microbubble Generator. *Micromachines*, **2020**, 11,	3.3	2
13	Excitation Position Sensitive Upconversion Emission of Lanthanide Ions Doped ÐNaYF4 Single Microcrystals. *ChemNanoMat*, **2018**, 4, 348-352	3.5	2
12	Area-selective and precise assembly of metal organic framework particles by atomic layer deposition induction and its application for ultra-sensitive dopamine sensor. *Nano Today*, **2022**, 42, 101347	17.9	2
11	Structural Coloration by Internal Reflection and Interference in Hydrogel Microbubbles and Their Precursors. *Advanced Optical Materials*, **2021**, 9, 2100259	8.1	2
10	Energy band modulation of GaAs/Al0.26Ga0.74As quantum well in 3D self-assembled nanomembranes. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2019**, 383, 2938-2942	2.3	1
9	Nanostructured WO3/BiVO4 heterojunction films embedded with Au nanoparticles for efficient photoelectrochemical water splitting. *MRS Communications*, **2021**, 11, 295-301	2.7	1
8	Transient Electronics: High-Temperature-Triggered Thermally Degradable Electronics Based on Flexible Silicon Nanomembranes (Adv. Funct. Mater. 45/2018). *Advanced Functional Materials*, **2018**, 28, 1870323	15.6	1

7	Local Cracking-Induced Scalable Flexible Silicon Nanogaps for Dynamically Tunable Surface Enhanced Raman Scattering Substrates. *Advanced Materials Interfaces*, **2021**, 8, 2100661	4.6	1
6	Catalytic/magnetic assemblies of rolled-up tubular nanomembrane-based micromotors.. *RSC Advances*, **2020**, 10, 36526-36530	3.7	0
5	Integration of a Metal-Organic Framework Film with a Tubular Whispering-Gallery-Mode Microcavity for Effective CO Sensing. *ACS Applied Materials & Interfaces*, **2021**, 13, 58104-58113	9.5	0
4	Growth and stress analyses of vanadium dioxide nanomembranes for controllable rolling. *Journal Physics D: Applied Physics*, **2020**, 53, 455105	3	0
3	Effects of Voltage and Temperature on Photoelectric Properties of Rolled-Up Quantum Well Nanomembranes. *Journal of Electronic Materials*, **2021**, 50, 3111-3115	1.9	0
2	Enhanced Evanescent Field Coupling of Smart Particles in Tubular Optical Microcavity for Sensing Application. *Advanced Optical Materials*, **2022**, 10, 2102158	8.1	0
1	Single Whispering Gallery Mode in Mesh-Structured Tubular Microcavity with Tunable Axial Confinement. *Advanced Photonics Research*, **2021**, 2, 2170014	1.9	