Wei Gao

List of Publications by Year
in descending order

150 papers	29,250 citations	4942 84 h-index	10127 140 g-index
160 all docs	160 docs citations	160 times ranked	22409 citing authors

#	ARTICLE	IF	CITATIONS
1	Fully integrated wearable sensor arrays for multiplexed in situ perspiration analysis. Nature, 2016, 529, 509-514.	13.7	3,508
2	Direct laser writing of micro-supercapacitors on hydrated graphite oxide films. Nature Nanotechnology, 2011, 6, 496-500.	15.6	1,322
3	Micro/nanorobots for biomedicine: Delivery, surgery, sensing, and detoxification. Science Robotics, 2017, 2, .	9.9	1,018
4	Wearable and flexible electronics for continuous molecular monitoring. Chemical Society Reviews, 2019, 48, 1465-1491.	18.7	855
5	Flexible Electronics toward Wearable Sensing. Accounts of Chemical Research, 2019, 52, 523-533.	7.6	713
6	A laser-engraved wearable sensor for sensitive detection of uric acid and tyrosine in sweat. Nature Biotechnology, 2020, 38, 217-224.	9.4	683
7	Autonomous sweat extraction and analysis applied to cystic fibrosis and glucose monitoring using a fully integrated wearable platform. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4625-4630.	3.3	573
8	Nano/Microscale Motors: Biomedical Opportunities and Challenges. ACS Nano, 2012, 6, 5745-5751.	7.3	565
9	Highly Efficient Catalytic Microengines: Template Electrosynthesis of Polyaniline/Platinum Microtubes. Journal of the American Chemical Society, 2011, 133, 11862-11864.	6.6	492
10	The Environmental Impact of Micro/Nanomachines: A Review. ACS Nano, 2014, 8, 3170-3180.	7.3	490
11	A Wearable Electrochemical Platform for Noninvasive Simultaneous Monitoring of Ca²⁺ and pH. ACS Nano, 2016, 10, 7216-7224.	7.3	480
12	Artificial Micromotors in the Mouseâ€™s Stomach: A Step toward <i>in Vivo</i> Use of Synthetic Motors. ACS Nano, 2015, 9, 117-123.	7.3	435
13	Wearable Microfluidic Diaphragm Pressure Sensor for Health and Tactile Touch Monitoring. Advanced Materials, 2017, 29, 1701985.	11.1	431
14	Cargoâ€Towing Fuelâ€Free Magnetic Nanoswimmers for Targeted Drug Delivery. Small, 2012, 8, 460-467.	5.2	393
15	Highly Efficient Light-Driven TiO₂â€“Au Janus Micromotors. ACS Nano, 2016, 10, 839-844.	7.3	392
16	Functionalized Ultrasound-Propelled Magnetically Guided Nanomotors: Toward Practical Biomedical Applications. ACS Nano, 2013, 7, 9232-9240.	7.3	386
17	Biofuel-powered soft electronic skin with multiplexed and wireless sensing for human-machine interfaces. Science Robotics, 2020, 5, .	9.9	385
18	Wireless battery-free wearable sweat sensor powered by human motion. Science Advances, 2020, 6, .	4.7	372

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19	Superhydrophobic Alkanethiol-Coated Microsubmarines for Effective Removal of Oil. ACS Nano, 2012, 6, 4445-4451.	7.3	371
20	Printed Carbon Nanotube Electronics and Sensor Systems. Advanced Materials, 2016, 28, 4397-4414.	11.1	369
21	Synthetic micro/nanomotors in drug delivery. Nanoscale, 2014, 6, 10486-10494.	2.8	367
22	Magnetically Powered Flexible Metal Nanowire Motors. Journal of the American Chemical Society, 2010, 132, 14403-14405.	6.6	362
23	Hydrogen-Bubble-Propelled Zinc-Based Microrockets in Strongly Acidic Media. Journal of the American Chemical Society, 2012, 134, 897-900.	6.6	351
24	SARS-CoV-2 RapidPlex: A Graphene-Based Multiplexed Telemedicine Platform for Rapid and Low-Cost COVID-19 Diagnosis and Monitoring. Matter, 2020, 3, 1981-1998.	5.0	347
25	Seawater-driven magnesium based Janus micromotors for environmental remediation. Nanoscale, 2013, 5, 4696.	2.8	333
26	Water-Driven Micromotors. ACS Nano, 2012, 6, 8432-8438.	7.3	326
27	A microrobotic system guided by photoacoustic computed tomography for targeted navigation in intestines in vivo. Science Robotics, 2019, 4, .	9.9	321
28	Water-Driven Micromotors for Rapid Photocatalytic Degradation of Biological and Chemical Warfare Agents. ACS Nano, 2014, 8, 11118-11125.	7.3	316
29	Bioinspired Helical Microswimmers Based on Vascular Plants. Nano Letters, 2014, 14, 305-310.	4.5	315
30	Fuelâ€Free Synthetic Microâ€/Nanomachines. Advanced Materials, 2017, 29, 1603250.	11.1	310
31	Bacterial Isolation by Lectin-Modified Microengines. Nano Letters, 2012, 12, 396-401.	4.5	300
32	Catalytic Iridium-Based Janus Micromotors Powered by Ultralow Levels of Chemical Fuels. Journal of the American Chemical Society, 2014, 136, 2276-2279.	6.6	300
33	Wearable Microsensor Array for Multiplexed Heavy Metal Monitoring of Body Fluids. ACS Sensors, 2016, 1, 866-874.	4.0	297
34	A Wearable Microfluidic Sensing Patch for Dynamic Sweat Secretion Analysis. ACS Sensors, 2018, 3, 944-952.	4.0	285
35	Visible-Light-Driven BiOI-Based Janus Micromotor in Pure Water. Journal of the American Chemical Society, 2017, 139, 1722-1725.	6.6	283
36	Roll-to-Roll Gravure Printed Electrochemical Sensors for Wearable and Medical Devices. ACS Nano, 2018, 12, 6978-6987.	7.3	275

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37	Investigation of Cortisol Dynamics in Human Sweat Using a Graphene-Based Wireless mHealth System. Matter, 2020, 2, 921-937.	5.0	269
38	Inhibition of Toll-Like Receptor Signaling as a Promising Therapy for Inflammatory Diseases: A Journey from Molecular to Nano Therapeutics. Frontiers in Physiology, 2017, 8, 508.	1.3	266
39	Self-Propelled Activated Carbon Janus Micromotors for Efficient Water Purification. Small, 2015, 11, 499-506.	5.2	259
40	Reversible Swarming and Separation of Self-Propelled Chemically Powered Nanomotors under Acoustic Fields. Journal of the American Chemical Society, 2015, 137, 2163-2166.	6.6	258
41	3Dâ€Printed Artificial Microfish. Advanced Materials, 2015, 27, 4411-4417.	11.1	251
42	Turning Erythrocytes into Functional Micromotors. ACS Nano, 2014, 8, 12041-12048.	7.3	247
43	Artificial Enzyme-Powered Microfish for Water-Quality Testing. ACS Nano, 2013, 7, 818-824.	7.3	226
44	Methylxanthine Drug Monitoring with Wearable Sweat Sensors. Advanced Materials, 2018, 30, e1707442.	11.1	226
45	Cellâ€Membraneâ€Coated Synthetic Nanomotors for Effective Biodetoxification. Advanced Functional Materials, 2015, 25, 3881-3887.	7.8	212
46	Highly sensitive and robust peroxidase-like activity of porous nanorods of ceria and their application for breast cancer detection. Biomaterials, 2015, 59, 116-124.	5.7	212
47	Flexible Electronics and Devices as Humanâ€“Machine Interfaces for Medical Robotics. Advanced Materials, 2022, 34, e2107902.	11.1	211
48	Light-Driven Au-WO₃@C Janus Micromotors for Rapid Photodegradation of Dye Pollutants. ACS Applied Materials & Interfaces, 2017, 9, 4674-4683.	4.0	210
49	Hollow Prussian Blue Nanozymes Drive Neuroprotection against Ischemic Stroke via Attenuating Oxidative Stress, Counteracting Inflammation, and Suppressing Cell Apoptosis. Nano Letters, 2019, 19, 2812-2823.	4.5	203
50	Flexible Electrochemical Bioelectronics: The Rise of In Situ Bioanalysis. Advanced Materials, 2020, 32, e1902083.	11.1	200
51	High-speed propulsion of flexible nanowire motors: Theory and experiments. Soft Matter, 2011, 7, 8169.	1.2	195
52	Molecularly Imprinted Polymer-Based Catalytic Micromotors for Selective Protein Transport. Journal of the American Chemical Society, 2013, 135, 5336-5339.	6.6	194
53	Organized Self-Assembly of Janus Micromotors with Hydrophobic Hemispheres. Journal of the American Chemical Society, 2013, 135, 998-1001.	6.6	189
54	Multiâ€Fuel Driven Janus Micromotors. Small, 2013, 9, 467-471.	5.2	184

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55	Medical micro/nanorobots in complex media. Chemical Society Reviews, 2020, 49, 8088-8112.	18.7	180
56	The Era of Digital Health: A Review of Portable and Wearable Affinity Biosensors. Advanced Functional Materials, 2020, 30, 1906713.	7.8	178
57	Emerging Telemedicine Tools for Remote COVID-19 Diagnosis, Monitoring, and Management. ACS Nano, 2020, 14, 16180-16193.	7.3	178
58	Ultrasound-Modulated Bubble Propulsion of Chemically Powered Microengines. Journal of the American Chemical Society, 2014, 136, 8552-8555.	6.6	177
59	Superfast Nearâ€Infrared Lightâ€Driven Polymer Multilayer Rockets. Small, 2016, 12, 577-582.	5.2	168
60	Application of 3D Printing for Smart Objects with Embedded Electronic Sensors and Systems. Advanced Materials Technologies, 2016, 1, 1600013.	3.0	167
61	Wearable electrochemical biosensors in North America. Biosensors and Bioelectronics, 2021, 172, 112750.	5.3	167
62	Prussian Blue Nanozyme with Multienzyme Activity Reduces Colitis in Mice. ACS Applied Materials & Interfaces, 2018, 10, 26108-26117.	4.0	157
63	Polymer-based tubular microbots: role of composition and preparation. Nanoscale, 2012, 4, 2447.	2.8	150
64	Wearable and Implantable Electronics: Moving toward Precision Therapy. ACS Nano, 2019, 13, 12280-12286.	7.3	150
65	Nanozyme-mediated catalytic nanotherapy for inflammatory bowel disease. Theranostics, 2019, 9, 2843-2855.	4.6	149
66	Micromotor-based lab-on-chip immunoassays. Nanoscale, 2013, 5, 1325-1331.	2.8	146
67	Nanomotor lithography. Nature Communications, 2014, 5, 5026.	5.8	141
68	Template electrosynthesis of tailored-made helical nanoswimmers. Nanoscale, 2014, 6, 9415-9420.	2.8	138
69	Bubble-Propelled Micromotors for Enhanced Transport of Passive Tracers. Langmuir, 2014, 30, 5082-5087.	1.6	136
70	Flexible and Superwettable Bands as a Platform toward Sweat Sampling and Sensing. Analytical Chemistry, 2019, 91, 4296-4300.	3.2	136
71	Skin-Interfaced Sensors in Digital Medicine: from Materials to Applications. Matter, 2020, 2, 1414-1445.	5.0	134
72	Hybrid Nanomotor: A Catalytically/Magnetically Powered Adaptive Nanowire Swimmer. Small, 2011, 7, 2047-2051.	5.2	132

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73	Photocatalytic Micro/Nanomotors: From Construction to Applications. Accounts of Chemical Research, 2018, 51, 1940-1947.	7.6	130
74	Microfluidic Lithography of Bioinspired Helical Micromotors. Angewandte Chemie - International Edition, 2017, 56, 12127-12131.	7.2	126
75	Self-Propelled Carbohydrate-Sensitive Microtransporters with Built-In Boronic Acid Recognition for Isolating Sugars and Cells. Journal of the American Chemical Society, 2012, 134, 15217-15220.	6.6	125
76	Dynamic Isolation and Unloading of Target Proteins by Aptamer-Modified Microtransporters. Analytical Chemistry, 2011, 83, 7962-7969.	3.2	122
77	Self-Powered Wearable Biosensors. Accounts of Materials Research, 2021, 2, 184-197.	5.9	118
78	General Thermal Texturization Process of MoS₂ for Efficient Electrocatalytic Hydrogen Evolution Reaction. Nano Letters, 2016, 16, 4047-4053.	4.5	106
79	Micromotors Go In Vivo: From Test Tubes to Live Animals. Advanced Functional Materials, 2018, 28, 1705640.	7.8	106
80	3D Printed â€œEarableâ€•Smart Devices for Real-Time Detection of Core Body Temperature. ACS Sensors, 2017, 2, 990-997.	4.0	105
81	All-printed soft human-machine interface for robotic physicochemical sensing. Science Robotics, 2022, 7, .	9.9	105
82	Hollow Magnetic Nanocatalysts Drive Starvationâ€"Chemodynamicâ€"Hyperthermia Synergistic Therapy for Tumor. ACS Nano, 2020, 14, 9662-9674.	7.3	103
83	Catalytically propelled microâ€/nanomotors: how fast can they move?. Chemical Record, 2012, 12, 224-231.	2.9	100
84	Toward inÂvivo detection of hydrogen peroxide with ultrasound molecular imaging. Biomaterials, 2013, 34, 8918-8924.	5.7	93
85	Macroscale Chemotaxis from a Swarm of Bacteriaâ€Mimicking Nanoswimmers. Angewandte Chemie - International Edition, 2019, 58, 12200-12205.	7.2	85
86	Superwettable Electrochemical Biosensor toward Detection of Cancer Biomarkers. ACS Sensors, 2018, 3, 72-78.	4.0	84
87	Fully Loaded Micromotors for Combinatorial Delivery and Autonomous Release of Cargoes. Small, 2014, 10, 2830-2833.	5.2	81
88	Dryâ€Released Nanotubes and Nanoengines by Particleâ€Assisted Rolling. Advanced Materials, 2013, 25, 3715-3721.	11.1	80
89	Glucose-Fueled Micromotors with Highly Efficient Visible-Light Photocatalytic Propulsion. ACS Applied Materials & Interfaces, 2019, 11, 6201-6207.	4.0	79
90	Wearable Bioelectronics for Chronic Wound Management. Advanced Functional Materials, 2022, 32, .	7.8	64

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91	A nanozyme tag enabled chemiluminescence imaging immunoassay for multiplexed cytokine monitoring. Chemical Communications, 2018, 54, 13813-13816.	2.2	62
92	Wearable physiological systems and technologies for metabolic monitoring. Journal of Applied Physiology, 2018, 124, 548-556.	1.2	60
93	Flexible Superwettable Tapes for On-Site Detection of Heavy Metals. Analytical Chemistry, 2018, 90, 14105-14110.	3.2	59
94	Prussian blue nanozyme-mediated nanoscavenger ameliorates acute pancreatitis via inhibiting TLRs/NF-Î°B signaling pathway. Theranostics, 2021, 11, 3213-3228.	4.6	58
95	Physical and Chemical Sensing With Electronic Skin. Proceedings of the IEEE, 2019, 107, 2155-2167.	16.4	56
96	Efficient bubble propulsion of polymer-based microengines in real-life environments. Nanoscale, 2013, 5, 8909.	2.8	54
97	Microengine-assisted electrochemical measurements at printable sensor strips. Chemical Communications, 2015, 51, 8668-8671.	2.2	52
98	Robotics in the Gut. Advanced Therapeutics, 2020, 3, 1900125.	1.6	50
99	Wearable Flexible Strain Sensor Based on Three-Dimensional Wavy Laser-Induced Graphene and Silicone Rubber. Sensors, 2020, 20, 4266.	2.1	50
100	Excavating bioactivities of nanozyme to remodel microenvironment for protecting chondrocytes and delaying osteoarthritis. Bioactive Materials, 2021, 6, 2439-2451.	8.6	49
101	A sequence of 28S rRNA-derived small RNAs is enriched in mature sperm and various somatic tissues and possibly associates with inflammation. Journal of Molecular Cell Biology, 2017, 9, 256-259.	1.5	45
102	Materials, Devices and Systems of Soft Bioelectronics for Precision Therapy. Advanced Healthcare Materials, 2017, 6, 1700017.	3.9	45
103	Printed thin film transistors and CMOS inverters based on semiconducting carbon nanotube ink purified by a nonlinear conjugated copolymer. Nanoscale, 2016, 8, 4588-4598.	2.8	44
104	Vapor-Driven Propulsion of Catalytic Micromotors. Scientific Reports, 2015, 5, 13226.	1.6	40
105	Simplified Costâ€Effective Preparation of Highâ€Performance Agâ€"Pt Nanowire Motors. ChemPhysChem, 2010, 11, 2802-2805.	1.0	39
106	Microfluidic Lithography of Bioinspired Helical Micromotors. Angewandte Chemie, 2017, 129, 12295-12299.	1.6	37
107	Laser-engraved graphene for flexible and wearable electronics. Trends in Chemistry, 2021, 3, 969-981.	4.4	34
108	Nanomotor-based biocatalytic patterning of helical metal microstructures. Nanoscale, 2013, 5, 1310-1314.	2.8	33

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109	Large-scale synthesis of monodisperse Prussian blue nanoparticles for cancer theranostics via an “in situ modification” strategy. International Journal of Nanomedicine, 2019, Volume 14, 271-288.	3.3	28
110	Integrating Highly Porous and Flexible Au Hydrogels with Soft-MEMS Technologies for High-Performance Wearable Biosensing. Analytical Chemistry, 2021, 93, 14068-14075.	3.2	28
111	Prussian Blue Nanozyme Promotes the Survival Rate of Skin Flaps by Maintaining a Normal Microenvironment. ACS Nano, 2022, 16, 9559-9571.	7.3	28
112	Motion-based threat detection using microrods: experiments and numerical simulations. Nanoscale, 2015, 7, 7833-7840.	2.8	26
113	Diagnostic accuracy of sub-mSv prospective ECG-triggering cardiac CT in young infant with complex congenital heart disease. International Journal of Cardiovascular Imaging, 2016, 32, 991-998.	0.7	25
114	Self-synergistic effect of Prussian blue nanoparticles for cancer therapy: driving photothermal therapy and reducing hyperthermia-induced side effects. Journal of Nanobiotechnology, 2021, 19, 126.	4.2	25
115	Self-propelled chemically-powered plant-tissue biomotors. Chemical Communications, 2013, 49, 7307.	2.2	23
116	Selective Dispersion of Largeâ€Diameter Semiconducting Carbon Nanotubes by Functionalized Conjugated Dendritic Oligothiophenes for Use in Printed Thin Film Transistors. Advanced Functional Materials, 2017, 27, 1703938.	7.8	22
117	Wearable sweat biosensors. , 2016, , .		20
118	Emulsion Hydrogel Soft Motor Actuated by Thermal Stimulation. ACS Applied Materials & Interfaces, 2017, 9, 43211-43219.	4.0	20
119	A Biofuel-Cell-Based Energy Harvester With 86% Peak Efficiency and 0.25-V Minimum Input Voltage Using Source-Adaptive MPPT. IEEE Journal of Solid-State Circuits, 2021, 56, 715-728.	3.5	20
120	Macroscale Chemotaxis from a Swarm of Bacteriaâ€Mimicking Nanoswimmers. Angewandte Chemie, 2019, 131, 12328-12333.	1.6	19
121	Ethical Considerations of Wearable Technologies in Human Research. Advanced Healthcare Materials, 2021, 10, e2100127.	3.9	19
122	Wearable pH sensing beyond the Nernst limit. Nature Electronics, 2018, 1, 580-581.	13.1	15
123	Wearable and Implantable Devices for Healthcare. Advanced Healthcare Materials, 2021, 10, e2101548.	3.9	15
124	Effective suppression of mode distortion induced by stimulated Raman scattering in high-power fiber amplifiers. High Power Laser Science and Engineering, 2021, 9, .	2.0	11
125	Magnetically Actuated Reactive Oxygen Species Scavenging Nanoâ€Robots for Targeted Treatment. Advanced Intelligent Systems, 2022, 4, .	3.3	11
126	Peripherally diketopyrrolopyrrole-functionalized dendritic oligothiophenes â€" synthesis, molecular structure, properties and applications. Polymer Chemistry, 2017, 8, 1460-1476.	1.9	9

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127	Downregulation of long noncoding RNA ZMAT1 transcript variant 2 predicts a poor prognosis in patients with gastric cancer. International Journal of Clinical and Experimental Pathology, 2015, 8, 5556-62.	0.5	9
128	Carbon Nanotubes: Printed Carbon Nanotube Electronics and Sensor Systems (Adv. Mater. 22/2016). Advanced Materials, 2016, 28, 4396-4396.	11.1	8
129	A soft bioaffinity sensor array for chronic wound monitoring. Matter, 2021, 4, 2613-2615.	5.0	8
130	Correlation of the Ï€-conjugation chain length and the property and photovoltaic performance of benzo[1,2-b:4,5-bâ€²]dithiophene-cored A-Ï€-D-Ï€-A type molecules. Solar Energy Materials and Solar Cells, 2016, 157, 831-843.	3.0	7
131	Flexible Electronics: Flexible Electrochemical Bioelectronics: The Rise of In Situ Bioanalysis (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlock 10	11.1	7
132	Restoring HOXD10 Exhibits Therapeutic Potential for Ameliorating Malignant Progression and 5-Fluorouracil Resistance in Colorectal Cancer. Frontiers in Oncology, 2021, 11, 771528.	1.3	7
133	Electrical impedance tomography for non-invasive identification of fatty liver infiltrate in overweight individuals. Scientific Reports, 2021, 11, 19859.	1.6	6
134	Coherent Energy and Charge Transport Processes in Oligothiophene Dendrimers Probed in Solution and in the Solid State with Time-Resolved Spectroscopy and Microscopy Methods. Journal of Physical Chemistry C, 2019, 123, 23419-23426.	1.5	5
135	An intelligent data-driven model for disease diagnosis based on machine learning theory. Journal of Combinatorial Optimization, 2021, 42, 884-895.	0.8	5
136	Wall-induced translation of a rotating particle in a shear-thinning fluid. Journal of Fluid Mechanics, 2021, 927, .	1.4	5
137	Over-exposure image correction with automatic texture synthesis. , 2011, , .		4
138	Tuning the optical and electrochemical properties of conjugated all-thiophene dendrimers via core functionalization with a benzothiadiazole unit. RSC Advances, 2017, 7, 1606-1616.	1.7	4
139	Spray-on magnetic skin for robotic actuation. Science Robotics, 2020, 5, .	9.9	4
140	Motile microelectronics with wireless power. Nature Electronics, 2020, 3, 139-140.	13.1	4
141	3D Porous Graphene Films with Largeâ€Area Inâ€Plane Exterior Skins. Advanced Materials Interfaces, 2022, 9, .	1.9	3
142	Microrobots in the Gastrointestinal Tract. , 2022, , 349-367.		2
143	Wearable Bioelectronics for Chronic Wound Management (Adv. Funct. Mater. 17/2022). Advanced Functional Materials, 2022, 32, .	7.8	1
144	Robust facial feature localization with probabilistic constrained local models. , 2012, , .		0

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145	A novel hierarchical decomposition model for facial caricature synthesis. , 2012, , .		0
146	Quantitative assessment of the influence of X-ray repair cross-complementing group 3 rs861539 polymorphism and cutaneous melanoma susceptibility. Archives of Dermatological Research, 2016, 308, 173-181.	1.1	0
147	Bioaffinity Sensors: The Era of Digital Health: A Review of Portable and Wearable Affinity Biosensors (Adv. Funct. Mater. 29/2020). Advanced Functional Materials, 2020, 30, 2070197.	7.8	0
148	Influence of the location of electron donating 3,4-ethylenedioxythiophene (EDOT) moiety in the A-Ï€-D-Ï€-A type conjugated molecules on the optoelectronic properties and photovoltaic performances. Organic Materials, 0, 03, .	1.0	0
149	Editorial on â€œWearable biosensors for personalized health monitoringâ€• Talanta, 2021, 234, 122635.	2.9	0
150	Wearable chemosensors. , 2022, , 219-234.		0