Sheng Xu

List of Publications by Year
in descending order

98 papers	17,594 citations	29994 54 h-index	51492 86 g-index
104 all docs	104 docs citations	104 times ranked	19169 citing authors

#	Article	IF	Citations
1	Soft wearable devices for deep-tissue sensing. Nature Reviews Materials, 2022, 7, 850-869.	23.3	103
2	Three-dimensional transistor arrays for intra- and inter-cellular recording. Nature Nanotechnology, 2022, 17, 292-300.	15.6	30
3	An epidermal patch for the simultaneous monitoring of haemodynamic and metabolic biomarkers. Nature Biomedical Engineering, 2021, 5, 737-748.	11.6	309
4	A self-sustainable wearable multi-modular E-textile bioenergy microgrid system. Nature Communications, 2021, 12, 1542.	5.8	164
5	Nanomaterial Biointerfacing via Mitochondrial Membrane Coating for Targeted Detoxification and Molecular Detection. Nano Letters, 2021, 21, 2603-2609.	4.5	37
6	Fabric-substrated capacitive biopotential sensors enhanced by dielectric nanoparticles. Nano Research, 2021, 14, 3248-3252.	5.8	13
7	(Invited) Adding a New Sensing Dimension to Soft Electronics: From the Skin to below the Skin. ECS Meeting Abstracts, 2021, MA2021-01, 1129-1129.	0.0	0
8	Smart Contact Lenses for Biosensing Applications. Advanced Intelligent Systems, 2021, 3, 2170047.	3.3	3
9	Smart Contact Lenses for Biosensing Applications. Advanced Intelligent Systems, 2021, 3, 2000263.	3.3	50
10	Single-crystal halide perovskites: Opportunities and challenges. Matter, 2021, 4, 2266-2308.	5.0	35
11	Instant, multiscale dry transfer printing by atomic diffusion control at heterogeneous interfaces. Science Advances, 2021, 7, .	4.7	22
12	A passive perspiration biofuel cell: High energy return on investment. Joule, 2021, 5, 1888-1904.	11.7	89
13	Continuous monitoring of deep-tissue haemodynamics with stretchable ultrasonic phased arrays. Nature Biomedical Engineering, 2021, 5, 749-758.	11.6	100
14	Wearable Biosupercapacitor: Harvesting and Storing Energy from Sweat. Advanced Functional Materials, 2021, 31, 2102915.	7.8	47
15	Demystifying phase transformations in metal halide perovskites. Matter, 2021, 4, 2627-2629.	5.0	3
16	Strain engineering and epitaxial stabilization of halide perovskites. Nature, 2020, 577, 209-215.	13.7	417
17	A fabrication process for flexible single-crystal perovskite devices. Nature, 2020, 583, 790-795.	13.7	278
18	Deciphering facial movements. Nature Biomedical Engineering, 2020, 4, 935-936.	11.6	0

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19	Role of the Metalâ€“Semiconductor Interface in Halide Perovskite Devices for Radiation Photon Counting. ACS Applied Materials & Interfaces, 2020, 12, 45533-45540.	4.0	21
20	Stretchable Nanolayered Thermoelectric Energy Harvester on Complex and Dynamic Surfaces. Nano Letters, 2020, 20, 4445-4453.	4.5	106
21	Hierarchical 0D-2D bio-composite film based on enzyme-loaded polymeric nanoparticles decorating graphene nanosheets as a high-performance bio-sensing platform. Biosensors and Bioelectronics, 2020, 156, 112134.	5.3	25
22	Frequency- and Power-Dependent Photoresponse of a Perovskite Photodetector Down to the Single-Photon Level. Nano Letters, 2020, 20, 2144-2151.	4.5	20
23	Soft sensors form a network. Nature Electronics, 2019, 2, 327-328.	13.1	8
24	A Biomimetic Soft Lens Controlled by Electrooculographic Signal. Advanced Functional Materials, 2019, 29, 1903762.	7.8	50
25	Stretchable and Flexible Buckypaperâ€Based Lactate Biofuel Cell for Wearable Electronics. Advanced Functional Materials, 2019, 29, 1905785.	7.8	132
26	Silver Nanoparticle-Enzyme Composite Films for Hydrogen Peroxide Detection. ACS Applied Nano Materials, 2019, 2, 5910-5921.	2.4	29
27	Wearable thermoelectrics for personalized thermoregulation. Science Advances, 2019, 5, eaaw0536.	4.7	299
28	Biomembrane-Modified Field Effect Transistors for Sensitive and Quantitative Detection of Biological Toxins and Pathogens. ACS Nano, 2019, 13, 3714-3722.	7.3	197
29	Array atomic force microscopy for real-time multiparametric analysis. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5872-5877.	3.3	18
30	Facile one-step fabrication of glucose oxidase loaded polymeric nanoparticles decorating MWCNTs for constructing glucose biosensing platform: Structure matters. Biosensors and Bioelectronics, 2019, 135, 153-159.	5.3	37
31	(Invited) Controlled Homo-Epitaxial Growth of Hybrid Halide Perovskites. ECS Meeting Abstracts, 2019, , .	0.0	0
32	(Invited) Hybridized Electronics for Wearable Healthcare: From the Skin to below the Skin. ECS Meeting Abstracts, 2019, , .	0.0	0
33	Controlled Homoepitaxial Growth of Hybrid Perovskites. Advanced Materials, 2018, 30, e1705992.	11.1	82
34	Stretchable ultrasonic transducer arrays for three-dimensional imaging on complex surfaces. Science Advances, 2018, 4, eaar3979.	4.7	204
35	Materials and Structures toward Soft Electronics. Advanced Materials, 2018, 30, e1801368.	11.1	445
36	Monitoring of the central blood pressure waveform via a conformal ultrasonic device. Nature Biomedical Engineering, 2018, 2, 687-695.	11.6	520

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37	Highly Stable Battery Pack via Insulated, Reinforced, Bucklingâ€Enabled Interconnect Array. Small, 2018, 14, e1800938.	5.2	35
38	Three-dimensional integrated stretchable electronics. Nature Electronics, 2018, 1, 473-480.	13.1	345
39	(Invited) Soft Electronic Devices for Noninvasive Health Monitoring: From the Skin to the Deep Tissues. ECS Meeting Abstracts, 2018, , .	0.0	0
40	Merging of Thinâ€•and Thickâ€Film Fabrication Technologies: Toward Soft Stretchable â€œIslandâ€"Bridgeâ€• Devices. Advanced Materials Technologies, 2017, 2, 1600284.	3.0	71
41	Electroplating lithium transition metal oxides. Science Advances, 2017, 3, e1602427.	4.7	62
42	Soft, stretchable, high power density electronic skin-based biofuel cells for scavenging energy from human sweat. Energy and Environmental Science, 2017, 10, 1581-1589.	15.6	309
43	Self-assembled three dimensional network designs for soft electronics. Nature Communications, 2017, 8, 15894.	5.8	325
44	Deterministic Integration of Biological and Soft Materials onto 3D Microscale Cellular Frameworks. Advanced Biology, 2017, 1, 1700068.	3.0	18
45	Soft, thin skin-mounted power management systems and their use in wireless thermography. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6131-6136.	3.3	139
46	Ferromagnetic, Folded Electrode Composite as a Soft Interface to the Skin for Longâ€Term Electrophysiological Recording. Advanced Functional Materials, 2016, 26, 7281-7290.	7.8	53
47	Battery-free, stretchable optoelectronic systems for wireless optical characterization of the skin. Science Advances, 2016, 2, e1600418.	4.7	336
48	(Invited) A Soft Approach to Electronics: From Stretchable Systems to 3D Structures. ECS Meeting Abstracts, 2016, , .	0.0	0
49	Epidermal Electronics: Miniaturized Flexible Electronic Systems with Wireless Power and Nearâ€Field Communication Capabilities (Adv. Funct. Mater. 30/2015). Advanced Functional Materials, 2015, 25, 4919-4919.	7.8	3
50	Miniaturized Flexible Electronic Systems with Wireless Power and Nearâ€Field Communication Capabilities. Advanced Functional Materials, 2015, 25, 4761-4767.	7.8	148
51	Assembly of micro/nanomaterials into complex, three-dimensional architectures by compressive buckling. Science, 2015, 347, 154-159.	6.0	745
52	Stretchable Electronics: Epidermal Electronics with Advanced Capabilities in Near-Field Communication (Small 8/2015). Small, 2015, 11, 905-905.	5.2	8
53	Soft network composite materials with deterministic and bio-inspired designs. Nature Communications, 2015, 6, 6566.	5.8	392
54	Holographic patterning of high-performance on-chip 3D lithium-ion microbatteries. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6573-6578.	3.3	179

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55	Lateral buckling and mechanical stretchability of fractal interconnects partially bonded onto an elastomeric substrate. Applied Physics Letters, 2015, 106, .	1.5	44
56	Epidermal Electronics with Advanced Capabilities in Near-Field Communication. Small, 2015, 11, 906-912.	5.2	224
57	Nanowires for Piezoelectric Nanogenerators. RSC Smart Materials, 2014, , 200-276.	0.1	0
58	A hierarchical computational model for stretchable interconnects with fractal-inspired designs. Journal of the Mechanics and Physics of Solids, 2014, 72, 115-130.	2.3	115
59	Soft Microfluidic Assemblies of Sensors, Circuits, and Radios for the Skin. Science, 2014, 344, 70-74.	6.0	982
60	Rugged and breathable forms of stretchable electronics with adherent composite substrates for transcutaneous monitoring. Nature Communications, 2014, 5, 4779.	5.8	309
61	Experimental and Theoretical Studies of Serpentine Microstructures Bonded To Prestrained Elastomers for Stretchable Electronics. Advanced Functional Materials, 2014, 24, 2028-2037.	7.8	273
62	Buckling in serpentine microstructures and applications in elastomer-supported ultra-stretchable electronics with high areal coverage. Soft Matter, 2013, 9, 8062.	1.2	248
63	Imprintable, Bendable, and Shapeâ€Conformable Polymer Electrolytes for Versatileâ€Shaped Lithiumâ€Ion Batteries. Advanced Materials, 2013, 25, 1395-1400.	11.1	183
64	Mechanics of ultra-stretchable self-similar serpentine interconnects. Acta Materialia, 2013, 61, 7816-7827.	3.8	183
65	Stretchable batteries with self-similar serpentine interconnects and integrated wireless recharging systems. Nature Communications, 2013, 4, 1543.	5.8	1,169
66	Polymer Electrolytes: Imprintable, Bendable, and Shapeâ€Conformable Polymer Electrolytes for Versatileâ€Shaped Lithiumâ€Ion Batteries (Adv. Mater. 10/2013). Advanced Materials, 2013, 25, 1512-1512.	11.1	1
67	Hybridizing ZnO Nanowires with Micropyramid Silicon Wafers as Superhydrophobic Highâ€Efficiency Solar Cells. Advanced Energy Materials, 2012, 2, 47-51.	10.2	89
68	Enhancing Light Emission of ZnO Microwire-Based Diodes by Piezo-Phototronic Effect. Nano Letters, 2011, 11, 4012-4017.	4.5	326
69	Growth and characterization of ZnO nanostructures for UV sensor applications. , 2011, , .		0
70	One-dimensional ZnO nanostructures: Solution growth and functional properties. Nano Research, 2011, 4, 1013-1098.	5.8	1,201
71	Oxide nanowire arrays for light-emitting diodes and piezoelectric energy harvesters. Pure and Applied Chemistry, 2011, 83, 2171-2198.	0.9	5
72	A General Approach for Fabricating Arcâ€Shaped Composite Nanowire Arrays by Pulsed Laser Deposition. Advanced Functional Materials, 2010, 20, 703-707.	7.8	27

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73	Growth and Transfer of Monolithic Horizontal ZnO Nanowire Superstructures onto Flexible Substrates. Advanced Functional Materials, 2010, 20, 1493-1497.	7.8	38
74	Ordered Nanowire Array Blue/Nearâ€UV Light Emitting Diodes. Advanced Materials, 2010, 22, 4749-4753.	11.1	206
75	Lateral nanowire/nanobelt based nanogenerators, piezotronics and piezo-phototronics. Materials Science and Engineering Reports, 2010, 70, 320-329.	14.8	223
76	Self-powered nanowire devices. Nature Nanotechnology, 2010, 5, 366-373.	15.6	1,462
77	Piezoelectric BaTiO₃Thin Film Nanogenerator on Plastic Substrates. Nano Letters, 2010, 10, 4939-4943.	4.5	711
78	Planar Waveguideâˆ'Nanowire Integrated Three-Dimensional Dye-Sensitized Solar Cells. Nano Letters, 2010, 10, 2092-2096.	4.5	99
79	Enhancing Sensitivity of a Single ZnO Micro-/Nanowire Photodetector by Piezo-phototronic Effect. ACS Nano, 2010, 4, 6285-6291.	7.3	466
80	Zinc Oxide Nanowire Arrays on Flexible Substrates. , 2010, , 197-226.		4
81	Growth and replication of ordered ZnO nanowire arrays on general flexible substrates. Journal of Materials Chemistry, 2010, 20, 10606.	6.7	69
82	Piezoelectric-nanowire-enabled power source for driving wireless microelectronics. Nature Communications, 2010, 1, 93.	5.8	449
83	Structural colors from <i>Morpho peleides</i> butterfly wing scales. Journal of Applied Physics, 2009, 106, .	1.1	47
84	Patterned Growth of Horizontal ZnO Nanowire Arrays. Journal of the American Chemical Society, 2009, 131, 6670-6671.	6.6	97
85	Optimizing and Improving the Growth Quality of ZnO Nanowire Arrays Guided by Statistical Design of Experiments. ACS Nano, 2009, 3, 1803-1812.	7.3	140
86	Growth of ZnO nanotube arrays and nanotube based piezoelectric nanogenerators. Journal of Materials Chemistry, 2009, 19, 9260.	6.7	181
87	Piezoelectric Potential Gated Field-Effect Transistor Based on a Free-Standing ZnO Wire. Nano Letters, 2009, 9, 3435-3439.	4.5	132
88	Four thiocyanato-bridged cadmium(II) polymeric complexes based on open chain diazine ligands. Journal of Molecular Structure, 2008, 875, 80-85.	1.8	8
89	Density-controlled growth of aligned ZnO nanowire arrays by seedless chemical approach on smooth surfaces. Journal of Materials Research, 2008, 23, 2072-2077.	1.2	240
90	Integrated Multilayer Nanogenerator Fabricated Using Paired Nanotip-to-Nanowire Brushes. Nano Letters, 2008, 8, 4027-4032.	4.5	146

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91	Patterned Growth of Vertically Aligned ZnO Nanowire Arrays on Inorganic Substrates at Low Temperature without Catalyst. Journal of the American Chemical Society, 2008, 130, 14958-14959.	6.6	270
92	Growth of Vertically Aligned ZnO Nanobelt Arrays on GaN Substrate. Journal of Physical Chemistry C, 2008, 112, 18935-18937.	1.5	35
93	Modifying the anti-wetting property of butterfly wings and water strider legs by atomic layer deposition coating: surface materials versus geometry. Nanotechnology, 2008, 19, 355708.	1.3	55
94	Syntheses and crystal structures of three Mn(II) complexes with 2-hydroxynicotinate. Inorganica Chimica Acta, 2007, 360, 1466-1473.	1.2	17
95	Structures and/or magnetic properties of three 1D ladder-type manganic and cadmium compounds with open-chain diazine Schiff-base ligands. Journal of Molecular Structure, 2007, 841, 67-72.	1.8	16
96	Evaluate simulation design alternatives for large scale manufacturing systems. , 2005, , .		5
97	Time Management in Distributed Factory Simulation, a Case Study Using HLA. , 0, , .		8
98	Advanced Decision Logic in Simulation of Material Flow Processing Networks. , 0, , .		0