Yonggang Huang

List of Publications by Citations

326 papers	43,393 citations	101 h-index	205 g-index
356 ext. papers	50,442 ext. citations	14.3 avg, IF	7.27 L-index

#	Paper	IF	Citations
326	Materials and mechanics for stretchable electronics. *Science*, **2010**, 327, 1603-7	33.3	3464
325	Epidermal electronics. *Science*, **2011**, 333, 838-43	33.3	3216
324	Dissolvable films of silk fibroin for ultrathin conformal bio-integrated electronics. *Nature Materials*, **2010**, 9, 511-7	27	1239
323	A hemispherical electronic eye camera based on compressible silicon optoelectronics. *Nature*, **2008**, 454, 748-53	50.4	1004
322	Stretchable batteries with self-similar serpentine interconnects and integrated wireless recharging systems. *Nature Communications*, **2013**, 4, 1543	17.4	978
321	A physically transient form of silicon electronics. *Science*, **2012**, 337, 1640-4	33.3	862
320	Injectable, cellular-scale optoelectronics with applications for wireless optogenetics. *Science*, **2013**, 340, 211-6	33.3	832
319	Ultrathin conformal devices for precise and continuous thermal characterization of human skin. *Nature Materials*, **2013**, 12, 938-44	27	826
318	Flexible, foldable, actively multiplexed, high-density electrode array for mapping brain activity in vivo. *Nature Neuroscience*, **2011**, 14, 1599-605	25.5	807
317	Soft microfluidic assemblies of sensors, circuits, and radios for the skin. *Science*, **2014**, 344, 70-4	33.3	802
316	Digital cameras with designs inspired by the arthropod eye. *Nature*, **2013**, 497, 95-9	50.4	721
315	A soft, wearable microfluidic device for the capture, storage, and colorimetric sensing of sweat. *Science Translational Medicine*, **2016**, 8, 366ra165	17.5	665
314	Fractal design concepts for stretchable electronics. *Nature Communications*, **2014**, 5, 3266	17.4	625
313	Printed assemblies of inorganic light-emitting diodes for deformable and semitransparent displays. *Science*, **2009**, 325, 977-81	33.3	617
312	Multifunctional epidermal electronics printed directly onto the skin. *Advanced Materials*, **2013**, 25, 2773-84	19.4	590
311	Materials science. Assembly of micro/nanomaterials into complex, three-dimensional architectures by compressive buckling. *Science*, **2015**, 347, 154-9	33.3	587
310	Conformal piezoelectric energy harvesting and storage from motions of the heart, lung, and diaphragm. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 1927-32	11.5	584

309	Transfer printing techniques for materials assembly and micro/nanodevice fabrication. *Advanced Materials*, **2012**, 24, 5284-318	24	572
308	Conformable amplified lead zirconate titanate sensors with enhanced piezoelectric response for cutaneous pressure monitoring. *Nature Communications*, **2014**, 5, 4496	17.4	571
307	Finite deformation mechanics in buckled thin films on compliant supports. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 15607-12	11.5	542
306	Soft, stretchable, fully implantable miniaturized optoelectronic systems for wireless optogenetics. *Nature Biotechnology*, **2015**, 33, 1280-1286	44.5	510
305	Materials and optimized designs for human-machine interfaces via epidermal electronics. *Advanced Materials*, **2013**, 25, 6839-46	24	509
304	Waterproof AlInGaP optoelectronics on stretchable substrates with applications in biomedicine and robotics. *Nature Materials*, **2010**, 9, 929-37	27	474
303	Stretchable, curvilinear electronics based on inorganic materials. *Advanced Materials*, **2010**, 22, 2108-24	24	437
302	3D multifunctional integumentary membranes for spatiotemporal cardiac measurements and stimulation across the entire epicardium. *Nature Communications*, **2014**, 5, 3329	17.4	384
301	Printing, folding and assembly methods for forming 3D mesostructures in advanced materials. *Nature Reviews Materials*, **2017**, 2,	73.3	372
300	A mechanically driven form of Kirigami as a route to 3D mesostructures in micro/nanomembranes. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 11757-64	11.5	344
299	Theoretical and Experimental Studies of Bending of Inorganic Electronic Materials on Plastic Substrates. *Advanced Functional Materials*, **2008**, 18, 2673-2684	15.6	341
298	Wireless Optofluidic Systems for Programmable In Vivo Pharmacology and Optogenetics. *Cell*, **2015**, 162, 662-74	56.2	326
297	Binodal, wireless epidermal electronic systems with in-sensor analytics for neonatal intensive care. *Science*, **2019**, 363,	33.3	316
296	Conformal piezoelectric systems for clinical and experimental characterization of soft tissue biomechanics. *Nature Materials*, **2015**, 14, 728-36	27	310
295	Skin-integrated wireless haptic interfaces for virtual and augmented reality. *Nature*, **2019**, 575, 473-479	50.4	307
294	Dissolvable Metals for Transient Electronics. *Advanced Functional Materials*, **2014**, 24, 645-658	15.6	290
293	Soft network composite materials with deterministic and bio-inspired designs. *Nature Communications*, **2015**, 6, 6566	17.4	289
292	High-performance biodegradable/transient electronics on biodegradable polymers. *Advanced Materials*, **2014**, 26, 3905-11	24	283

291	Recent progress in flexible and stretchable piezoelectric devices for mechanical energy harvesting, sensing and actuation. *Extreme Mechanics Letters*, **2016**, 9, 269-281	3.9	281
290	Microstructured elastomeric surfaces with reversible adhesion and examples of their use in deterministic assembly by transfer printing. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 17095-100	11.5	280
289	Battery-free, stretchable optoelectronic systems for wireless optical characterization of the skin. *Science Advances*, **2016**, 2, e1600418	14.3	266
288	Rugged and breathable forms of stretchable electronics with adherent composite substrates for transcutaneous monitoring. *Nature Communications*, **2014**, 5, 4779	17.4	245
287	Stretchable GaAs photovoltaics with designs that enable high areal coverage. *Advanced Materials*, **2011**, 23, 986-91	24	245
286	Self-assembled three dimensional network designs for soft electronics. *Nature Communications*, **2017**, 8, 15894	17.4	238
285	Soft, curved electrode systems capable of integration on the auricle as a persistent brain-computer interface. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 3920-5	11.5	238
284	Materials and Designs for Wireless Epidermal Sensors of Hydration and Strain. *Advanced Functional Materials*, **2014**, 24, 3846-3854	15.6	230
283	Biodegradable elastomers and silicon nanomembranes/nanoribbons for stretchable, transient electronics, and biosensors. *Nano Letters*, **2015**, 15, 2801-8	11.5	226
282	Flexible Near-Field Wireless Optoelectronics as Subdermal Implants for Broad Applications in Optogenetics. *Neuron*, **2017**, 93, 509-521.e3	13.9	225
281	Epidermal mechano-acoustic sensing electronics for cardiovascular diagnostics and human-machine interfaces. *Science Advances*, **2016**, 2, e1601185	14.3	220
280	Experimental and Theoretical Studies of Serpentine Microstructures Bonded To Prestrained Elastomers for Stretchable Electronics. *Advanced Functional Materials*, **2014**, 24, 2028-2037	15.6	220
279	A wireless closed-loop system for optogenetic peripheral neuromodulation. *Nature*, **2019**, 565, 361-365	50.4	217
278	Morphable 3D mesostructures and microelectronic devices by multistable buckling mechanics. *Nature Materials*, **2018**, 17, 268-276	27	216
277	Origami MEMS and NEMS. *MRS Bulletin*, **2016**, 41, 123-129	3.2	211
276	Three-dimensional piezoelectric polymer microsystems for vibrational energy harvesting, robotic interfaces and biomedical implants. *Nature Electronics*, **2019**, 2, 26-35	28.4	209
275	Dynamically tunable hemispherical electronic eye camera system with adjustable zoom capability. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 1788-93	11.5	194
274	Buckling in serpentine microstructures and applications in elastomer-supported ultra-stretchable electronics with high areal coverage. *Soft Matter*, **2013**, 9, 8062-8070	3.6	192

273	Epidermal electronics with advanced capabilities in near-field communication. *Small*, **2015**, 11, 906-12	11	191
272	Electronic sensor and actuator webs for large-area complex geometry cardiac mapping and therapy. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 19910-5	11.5	190
271	Unusual strategies for using indium gallium nitride grown on silicon (111) for solid-state lighting. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 10072-7	11.5	189
270	Controlled mechanical buckling for origami-inspired construction of 3D microstructures in advanced materials. *Advanced Functional Materials*, **2016**, 26, 2629-2639	15.6	188
269	Curvilinear electronics formed using silicon membrane circuits and elastomeric transfer elements. *Small*, **2009**, 5, 2703-9	11	186
268	Epidermal photonic devices for quantitative imaging of temperature and thermal transport characteristics of the skin. *Nature Communications*, **2014**, 5, 4938	17.4	185
267	Miniaturized Battery-Free Wireless Systems for Wearable Pulse Oximetry. *Advanced Functional Materials*, **2017**, 27, 1604373	15.6	182
266	Battery-free, wireless sensors for full-body pressure and temperature mapping. *Science Translational Medicine*, **2018**, 10,	17.5	176
265	Multifunctional skin-like electronics for quantitative, clinical monitoring of cutaneous wound healing. *Advanced Healthcare Materials*, **2014**, 3, 1597-607	10.1	175
264	An Epidermal Stimulation and Sensing Platform for Sensorimotor Prosthetic Control, Management of Lower Back Exertion, and Electrical Muscle Activation. *Advanced Materials*, **2016**, 28, 4462-71	24	173
263	Dissolution Behaviors and Applications of Silicon Oxides and Nitrides in Transient Electronics. *Advanced Functional Materials*, **2014**, 24, 4427-4434	15.6	170
262	Silicon nanomembranes for fingertip electronics. *Nanotechnology*, **2012**, 23, 344004	3.4	168
261	Materials for stretchable electronics in bioinspired and biointegrated devices. *MRS Bulletin*, **2012**, 37, 226-235	3.2	166
260	Capacitively Coupled Arrays of Multiplexed Flexible Silicon Transistors for Long-Term Cardiac Electrophysiology. *Nature Biomedical Engineering*, **2017**, 1,	19	163
259	Stretchable ferroelectric nanoribbons with wavy configurations on elastomeric substrates. *ACS Nano*, **2011**, 5, 3326-32	16.7	162
258	Adaptive optoelectronic camouflage systems with designs inspired by cephalopod skins. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 12998-3003	11.5	159
257	A nonlinear mechanics model of bio-inspired hierarchical lattice materials consisting of horseshoe microstructures. *Journal of the Mechanics and Physics of Solids*, **2016**, 90, 179-202	5	155
256	Mechanical assembly of complex, 3D mesostructures from releasable multilayers of advanced materials. *Science Advances*, **2016**, 2, e1601014	14.3	152

255	Mechanics of ultra-stretchable self-similar serpentine interconnects. *Acta Materialia*, **2013**, 61, 7816-7827	8.4	147
254	Mechanics of stretchable batteries and supercapacitors. *Current Opinion in Solid State and Materials Science*, **2015**, 19, 190-199	12	147
253	Compliant and stretchable thermoelectric coils for energy harvesting in miniature flexible devices. *Science Advances*, **2018**, 4, eaau5849	14.3	147
252	A skin-attachable, stretchable integrated system based on liquid GaInSn for wireless human motion monitoring with multi-site sensing capabilities. *NPG Asia Materials*, **2017**, 9, e443-e443	10.3	145
251	Epidermal devices for noninvasive, precise, and continuous mapping of macrovascular and microvascular blood flow. *Science Advances*, **2015**, 1, e1500701	14.3	145
250	Dissolution chemistry and biocompatibility of single-crystalline silicon nanomembranes and associated materials for transient electronics. *ACS Nano*, **2014**, 8, 5843-51	16.7	145
249	Large-area MRI-compatible epidermal electronic interfaces for prosthetic control and cognitive monitoring. *Nature Biomedical Engineering*, **2019**, 3, 194-205	19	144
248	Waterproof, electronics-enabled, epidermal microfluidic devices for sweat collection, biomarker analysis, and thermography in aquatic settings. *Science Advances*, **2019**, 5, eaau6356	14.3	142
247	Electronically programmable, reversible shape change in two- and three-dimensional hydrogel structures. *Advanced Materials*, **2013**, 25, 1541-6	24	140
246	Two-dimensional materials in functional three-dimensional architectures with applications in photodetection and imaging. *Nature Communications*, **2018**, 9, 1417	17.4	136
245	Skin-interfaced biosensors for advanced wireless physiological monitoring in neonatal and pediatric intensive-care units. *Nature Medicine*, **2020**, 26, 418-429	50.5	134
244	Ultrathin, transferred layers of thermally grown silicon dioxide as biofluid barriers for biointegrated flexible electronic systems. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 11682-11687	11.5	133
243	Optimized structural designs for stretchable silicon integrated circuits. *Small*, **2009**, 5, 2841-7	11	131
242	25th anniversary article: materials for high-performance biodegradable semiconductor devices. *Advanced Materials*, **2014**, 26, 1992-2000	24	130
241	Assembly of Advanced Materials into 3D Functional Structures by Methods Inspired by Origami and Kirigami: A Review. *Advanced Materials Interfaces*, **2018**, 5, 1800284	4.6	129
240	Mechanics of Epidermal Electronics. *Journal of Applied Mechanics, Transactions ASME*, **2012**, 79,	2.7	129
239	Materials and fractal designs for 3D multifunctional integumentary membranes with capabilities in cardiac electrotherapy. *Advanced Materials*, **2015**, 27, 1731-7	24	117
238	Bioresorbable pressure sensors protected with thermally grown silicon dioxide for the monitoring of chronic diseases and healing processes. *Nature Biomedical Engineering*, **2019**, 3, 37-46	19	115

237	Miniaturized Flexible Electronic Systems with Wireless Power and Near-Field Communication Capabilities. *Advanced Functional Materials*, **2015**, 25, 4761-4767	15.6	114
236	Mechano-acoustic sensing of physiological processes and body motions via a soft wireless device placed at the suprasternal notch. *Nature Biomedical Engineering*, **2020**, 4, 148-158	19	109
235	Relation between blood pressure and pulse wave velocity for human arteries. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 11144-11149	11.5	109
234	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, 6131-6	11.5	108
233	Postbuckling analysis and its application to stretchable electronics. *Journal of the Mechanics and Physics of Solids*, **2012**, 60, 487-508	5	107
232	Active, Programmable Elastomeric Surfaces with Tunable Adhesion for Deterministic Assembly by Transfer Printing. *Advanced Functional Materials*, **2012**, 22, 4476-4484	15.6	107
231	Shear-enhanced adhesiveless transfer printing for use in deterministic materials assembly. *Applied Physics Letters*, **2011**, 98, 264104	3.4	106
230	Three-dimensional mesostructures as high-temperature growth templates, electronic cellular scaffolds, and self-propelled microrobots. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E9455-E9464	11.5	104
229	Mechanically-Guided Structural Designs in Stretchable Inorganic Electronics. *Advanced Materials*, **2020**, 32, e1902254	24	104
228	Highly flexible, wearable, and disposable cardiac biosensors for remote and ambulatory monitoring. *Npj Digital Medicine*, **2018**, 1, 2	15.7	103
227	Finite width effect of thin-films buckling on compliant substrate: Experimental and theoretical studies. *Journal of the Mechanics and Physics of Solids*, **2008**, 56, 2585-2598	5	102
226	In-Plane Deformation Mechanics for Highly Stretchable Electronics. *Advanced Materials*, **2017**, 29, 1604989	24	101
225	Mechanics of precisely controlled thin film buckling on elastomeric substrate. *Applied Physics Letters*, **2007**, 90, 133119	3.4	101
224	Design and application of ℧-shapedTstress-strain behavior in stretchable electronics: a review. *Lab on A Chip*, **2017**, 17, 1689-1704	7.2	99
223	Soft Core/Shell Packages for Stretchable Electronics. *Advanced Functional Materials*, **2015**, 25, 3698-3704	15.6	98
222	Soft, skin-mounted microfluidic systems for measuring secretory fluidic pressures generated at the surface of the skin by eccrine sweat glands. *Lab on A Chip*, **2017**, 17, 2572-2580	7.2	93
221	Mechanics and thermal management of stretchable inorganic electronics. *National Science Review*, **2016**, 3, 128-143	10.8	92
220	Fully implantable optoelectronic systems for battery-free, multimodal operation in neuroscience research. *Nature Electronics*, **2018**, 1, 652-660	28.4	92

219	Flexible and Stretchable Antennas for Biointegrated Electronics. *Advanced Materials*, **2020**, 32, e1902767	24	90
218	A hierarchical computational model for stretchable interconnects with fractal-inspired designs. *Journal of the Mechanics and Physics of Solids*, **2014**, 72, 115-130	5	89
217	Stretchable semiconductor technologies with high areal coverages and strain-limiting behavior: demonstration in high-efficiency dual-junction GaInP/GaAs photovoltaics. *Small*, **2012**, 8, 1851-6	11	86
216	Bioresorbable optical sensor systems for monitoring of intracranial pressure and temperature. *Science Advances*, **2019**, 5, eaaw1899	14.3	85
215	Experimental and Theoretical Studies of Serpentine Interconnects on Ultrathin Elastomers for Stretchable Electronics. *Advanced Functional Materials*, **2017**, 27, 1702589	15.6	85
214	Micromechanics and advanced designs for curved photodetector arrays in hemispherical electronic-eye cameras. *Small*, **2010**, 6, 851-6	11	84
213	Theoretical and Experimental Studies of Epidermal Heat Flux Sensors for Measurements of Core Body Temperature. *Advanced Healthcare Materials*, **2016**, 5, 119-27	10.1	83
212	Super-Absorbent Polymer Valves and Colorimetric Chemistries for Time-Sequenced Discrete Sampling and Chloride Analysis of Sweat via Skin-Mounted Soft Microfluidics. *Small*, **2018**, 14, e1703334	11	81
211	Battery-free, fully implantable optofluidic cuff system for wireless optogenetic and pharmacological neuromodulation of peripheral nerves. *Science Advances*, **2019**, 5, eaaw5296	14.3	79
210	Fully implantable, battery-free wireless optoelectronic devices for spinal optogenetics. *Pain*, **2017**, 158, 2108-2116	8	76
209	Multimodal Sensing with a Three-Dimensional Piezoresistive Structure. *ACS Nano*, **2019**, 13, 10972-10979	16.7	75
208	Design of Strain-Limiting Substrate Materials for Stretchable and Flexible Electronics. *Advanced Functional Materials*, **2016**, 26, 5345-5351	15.6	75
207	Catheter-integrated soft multilayer electronic arrays for multiplexed sensing and actuation during cardiac surgery. *Nature Biomedical Engineering*, **2020**, 4, 997-1009	19	74
206	Optics and Nonlinear Buckling Mechanics in Large-Area, Highly Stretchable Arrays of Plasmonic Nanostructures. *ACS Nano*, **2015**, 9, 5968-75	16.7	73
205	Wireless, battery-free, fully implantable multimodal and multisite pacemakers for applications in small animal models. *Nature Communications*, **2019**, 10, 5742	17.4	72
204	Freestanding 3D Mesostructures, Functional Devices, and Shape-Programmable Systems Based on Mechanically Induced Assembly with Shape Memory Polymers. *Advanced Materials*, **2019**, 31, e1805615	24	72
203	Flexible and Stretchable 3ω Sensors for Thermal Characterization of Human Skin. *Advanced Functional Materials*, **2017**, 27, 1701282	15.6	71
202	Elasticity of fractal inspired interconnects. *Small*, **2015**, 11, 367-73	11	71

201	Needle-shaped ultrathin piezoelectric microsystem for guided tissue targeting via mechanical sensing. *Nature Biomedical Engineering*, **2018**, 2, 165-172	19	71
200	Electrochemical Properties of Si-Ge Heterostructures as an Anode Material for Lithium Ion Batteries. *Advanced Functional Materials*, **2014**, 24, 1458-1464	15.6	71
199	Kinetically controlled, adhesiveless transfer printing using microstructured stamps. *Applied Physics Letters*, **2009**, 94, 113502	3.4	71
198	A high-density, high-channel count, multiplexed ECoG array for auditory-cortex recordings. *Journal of Neurophysiology*, **2014**, 112, 1566-83	3.2	69
197	Soft Elastomers with Ionic Liquid-Filled Cavities as Strain Isolating Substrates for Wearable Electronics. *Small*, **2017**, 13, 1602954	11	67
196	Development of a neural interface for high-definition, long-term recording in rodents and nonhuman primates. *Science Translational Medicine*, **2020**, 12,	17.5	64
195	An Analytical Model of Reactive Diffusion for Transient Electronics. *Advanced Functional Materials*, **2013**, 23, 3106-3114	15.6	63
194	Biological lipid membranes for on-demand, wireless drug delivery from thin, bioresorbable electronic implants. *NPG Asia Materials*, **2015**, 7,	10.3	61
193	Battery-free, lightweight, injectable microsystem for in vivo wireless pharmacology and optogenetics. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 21427-21437	11.5	61
192	Dissolution of Monocrystalline Silicon Nanomembranes and Their Use as Encapsulation Layers and Electrical Interfaces in Water-Soluble Electronics. *ACS Nano*, **2017**, 11, 12562-12572	16.7	61
191	Local versus global buckling of thin films on elastomeric substrates. *Applied Physics Letters*, **2008**, 93, 023126	3.4	61
190	Stretchable, dynamic covalent polymers for soft, long-lived bioresorbable electronic stimulators designed to facilitate neuromuscular regeneration. *Nature Communications*, **2020**, 11, 5990	17.4	58
189	Modulated Degradation of Transient Electronic Devices through Multilayer Silk Fibroin Pockets. *ACS Applied Materials & Interfaces*, **2015**, 7, 19870-5	9.5	57
188	Guided Formation of 3D Helical Mesostructures by Mechanical Buckling: Analytical Modeling and Experimental Validation. *Advanced Functional Materials*, **2016**, 26, 2909-2918	15.6	57
187	Mechanically active materials in three-dimensional mesostructures. *Science Advances*, **2018**, 4, eaat8313	14.3	57
186	Deterministic assembly of 3D mesostructures in advanced materials via compressive buckling: A short review of recent progress. *Extreme Mechanics Letters*, **2017**, 11, 96-104	3.9	56
185	Compact monocrystalline silicon solar modules with high voltage outputs and mechanically flexible designs. *Energy and Environmental Science*, **2010**, 3, 208	35.4	56
184	Epidermal radio frequency electronics for wireless power transfer. *Microsystems and Nanoengineering*, **2016**, 2, 16052	7.7	55

183	Mechanics of curvilinear electronics. *Soft Matter*, **2010**, 6, 5757	3.6	55
182	Post-buckling analysis for the precisely controlled buckling of thin film encapsulated by elastomeric substrates. *International Journal of Solids and Structures*, **2008**, 45, 2014-2023	3.1	55
181	A Generic Soft Encapsulation Strategy for Stretchable Electronics. *Advanced Functional Materials*, **2019**, 29, 1806630	15.6	55
180	A finite deformation model of planar serpentine interconnects for stretchable electronics. *International Journal of Solids and Structures*, **2016**, 91, 46-54	3.1	54
179	Wireless, Battery-Free Epidermal Electronics for Continuous, Quantitative, Multimodal Thermal Characterization of Skin. *Small*, **2018**, 14, e1803192	11	53
178	Chemical Sensing Systems that Utilize Soft Electronics on Thin Elastomeric Substrates with Open Cellular Designs. *Advanced Functional Materials*, **2017**, 9, 1605476	15.6	51
177	Buckling and twisting of advanced materials into morphable 3D mesostructures. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 13239-13248	11.5	51
176	Epidermal electronics for noninvasive, wireless, quantitative assessment of ventricular shunt function in patients with hydrocephalus. *Science Translational Medicine*, **2018**, 10,	17.5	51
175	Natural Wax for Transient Electronics. *Advanced Functional Materials*, **2018**, 28, 1801819	15.6	50
174	Enhanced adhesion with pedestal-shaped elastomeric stamps for transfer printing. *Applied Physics Letters*, **2012**, 100, 171909	3.4	47
173	Mechanical Designs for Inorganic Stretchable Circuits in Soft Electronics. *IEEE Transactions on Components, Packaging and Manufacturing Technology*, **2015**, 5, 1201-1218	1.7	46
172	All-Elastomeric, Strain-Responsive Thermochromic Color Indicators. *Small*, **2014**, 10, 1266-1271	11	46
171	Buckling of a stiff thin film on a pre-strained bi-layer substrate. *International Journal of Solids and Structures*, **2014**, 51, 3113-3118	3.1	45
170	The equivalent medium of cellular substrate under large stretching, with applications to stretchable electronics. *Journal of the Mechanics and Physics of Solids*, **2018**, 120, 199-207	5	45
169	Flexible electronic/optoelectronic microsystems with scalable designs for chronic biointegration. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 15398-15406	11.5	44
168	Thin, Transferred Layers of Silicon Dioxide and Silicon Nitride as Water and Ion Barriers for Implantable Flexible Electronic Systems. *Advanced Electronic Materials*, **2017**, 3, 1700077	6.4	44
167	High Performance, Tunable Electrically Small Antennas through Mechanically Guided 3D Assembly. *Small*, **2019**, 15, e1804055	11	44
166	Engineered elastomer substrates for guided assembly of complex 3D mesostructures by spatially nonuniform compressive buckling. *Advanced Functional Materials*, **2017**, 27, 1604281	15.6	41

165	Harnessing the interface mechanics of hard films and soft substrates for 3D assembly by controlled buckling. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 15368-15377	11.5	40
164	Plasticity-induced origami for assembly of three dimensional metallic structures guided by compressive buckling. *Extreme Mechanics Letters*, **2017**, 11, 105-110	3.9	40
163	Mechanics of reversible adhesion. *Soft Matter*, **2011**, 7, 8657	3.6	40
162	Multimodal epidermal devices for hydration monitoring. *Microsystems and Nanoengineering*, **2017**, 3, 17014	7.7	40
161	Ferromagnetic, folded electrode composite as a soft interface to the skin for long-term electrophysiological recording. *Advanced Functional Materials*, **2016**, 26, 7281-7290	15.6	40
160	Three-Dimensional Multiscale, Multistable, and Geometrically Diverse Microstructures with Tunable Vibrational Dynamics Assembled by Compressive Buckling. *Advanced Functional Materials*, **2017**, 27, 1605914	15.6	39
159	Wireless sensors for continuous, multimodal measurements at the skin interface with lower limb prostheses. *Science Translational Medicine*, **2020**, 12,	17.5	39
158	Resettable skin interfaced microfluidic sweat collection devices with chemesthetic hydration feedback. *Nature Communications*, **2019**, 10, 5513	17.4	39
157	A double perturbation method of postbuckling analysis in 2D curved beams for assembly of 3D ribbon-shaped structures. *Journal of the Mechanics and Physics of Solids*, **2018**, 111, 215-238	5	38
156	Kinetics and Chemistry of Hydrolysis of Ultrathin, Thermally Grown Layers of Silicon Oxide as Biofluid Barriers in Flexible Electronic Systems. *ACS Applied Materials & Interfaces*, **2017**, 9, 42633-42638	9.5	38
155	Fully implantable and bioresorbable cardiac pacemakers without leads or batteries. *Nature Biotechnology*, **2021**, 39, 1228-1238	44.5	38
154	Three-dimensional, multifunctional neural interfaces for cortical spheroids and engineered assembloids. *Science Advances*, **2021**, 7,	14.3	38
153	Microwave purification of large-area horizontally aligned arrays of single-walled carbon nanotubes. *Nature Communications*, **2014**, 5, 5332	17.4	37
152	Transferred, Ultrathin Oxide Bilayers as Biofluid Barriers for Flexible Electronic Implants. *Advanced Functional Materials*, **2018**, 28, 1702284	15.6	36
151	Ultrathin Injectable Sensors of Temperature, Thermal Conductivity, and Heat Capacity for Cardiac Ablation Monitoring. *Advanced Healthcare Materials*, **2016**, 5, 373-81	10.1	36
150	Flexible Transient Optical Waveguides and Surface-Wave Biosensors Constructed from Monocrystalline Silicon. *Advanced Materials*, **2018**, 30, e1801584	24	36
149	Designing Thin, Ultrastretchable Electronics with Stacked Circuits and Elastomeric Encapsulation Materials. *Advanced Functional Materials*, **2017**, 27, 1604545	15.6	35
148	Bioresorbable, Wireless, Passive Sensors as Temporary Implants for Monitoring Regional Body Temperature. *Advanced Healthcare Materials*, **2020**, 9, e2000942	10.1	35

147	A Bioresorbable Magnetically Coupled System for Low-Frequency Wireless Power Transfer. *Advanced Functional Materials*, **2019**, 29, 1905451	15.6	35
146	2D Mechanical Metamaterials with Widely Tunable Unusual Modes of Thermal Expansion. *Advanced Materials*, **2019**, 31, e1905405	24	35
145	Wirelessly controlled, bioresorbable drug delivery device with active valves that exploit electrochemically triggered crevice corrosion. *Science Advances*, **2020**, 6, eabb1093	14.3	35
144	Materials and Wireless Microfluidic Systems for Electronics Capable of Chemical Dissolution on Demand. *Advanced Functional Materials*, **2015**, 25, 1338-1343	15.6	34
143	Mechanics of Tunable Hemispherical Electronic Eye Camera Systems That Combine Rigid Device Elements With Soft Elastomers. *Journal of Applied Mechanics, Transactions ASME*, **2013**, 80,	2.7	34
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