

# John A Rogers

## 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.

607  
papers

68,735  
citations

129  
h-index

249  
g-index

690  
ext. papers

79,820  
ext. citations

14.3  
avg, IF

7.94  
L-index

#	Paper	IF	Citations
607	Mechanically Guided Hierarchical Assembly of 3D Mesostructures.. <i>Advanced Materials</i> , <b>2022</b> , e2109416	24	1
606	Materials and Interface Designs of Waterproof Field-Effect Transistor Arrays for Detection of Neurological Biomarkers.. <i>Small</i> , <b>2022</b> , e2106866	11	1
605	Artificial stretchable armor for skin-interfaced wearable devices and soft robotics. <i>Extreme Mechanics Letters</i> , <b>2022</b> , 50, 101537	3.9	2
604	Waterproof, flexible field-effect transistors with submicron monocrystalline Si nanomembrane derived encapsulation for continuous pH sensing. <i>Biosensors and Bioelectronics</i> , <b>2022</b> , 195, 113683	11.8	2
603	Electrophysiology and Arrhythmogenesis in the Human Right Ventricular Outflow Tract.. <i>Circulation: Arrhythmia and Electrophysiology</i> , <b>2022</b> , CIRCEP121010630	6.4	1
602	Biomimetic and Biologically Compliant Soft Architectures via 3D and 4D Assembly Methods: A Perspective.. <i>Advanced Materials</i> , <b>2022</b> , e2108391	24	5
601	Analytical Modeling of Flowrate and Its Maxima in Electrochemical Bioelectronics with Drug Delivery Capabilities.. <i>Research</i> , <b>2022</b> , 2022, 9805932	7.8	
600	Implantable, wireless, self-fixing thermal sensors for continuous measurements of microvascular blood flow in flaps and organ grafts.. <i>Biosensors and Bioelectronics</i> , <b>2022</b> , 206, 114145	11.8	2
599	A transient, closed-loop network of wireless, body-integrated devices for autonomous electrotherapy. <i>Science</i> , <b>2022</b> , 376, 1006-1012	33.3	17
598	Molecular engineering of nanoactuators for neuromodulation. <i>Matter</i> , <b>2022</b> , 5, 1631-1633	12.7	
597	Sun exposure reduction by melanoma survivors with wearable sensor providing real-time UV exposure and daily text messages with structured goal setting. <i>Archives of Dermatological Research</i> , <b>2021</b> , 313, 685-694	3.3	3
596	Implantable LED for Optogenetics. <i>Series in Display Science and Technology</i> , <b>2021</b> , 115-140	0.1	
595	Theoretical modeling of tunable vibrations of three-dimensional serpentine structures for simultaneous measurement of adherent cell mass and modulus <b>2021</b> , 46, 107		1
594	A Skin-Interfaced, Miniaturized Microfluidic Analysis and Delivery System for Colorimetric Measurements of Nutrients in Sweat and Supply of Vitamins Through the Skin. <i>Advanced Science</i> , <b>2021</b> , e2103331	13.6	13
593	Complex 3D microfluidic architectures formed by mechanically guided compressive buckling. <i>Science Advances</i> , <b>2021</b> , 7, eabj3686	14.3	11
592	An on-skin platform for wireless monitoring of flow rate, cumulative loss and temperature of sweat in real time. <i>Nature Electronics</i> , <b>2021</b> , 4, 302-312	28.4	33
591	Sufficient sampling for kriging prediction of cortical potential in rat, monkey, and human $\mu$ ECoG. <i>Journal of Neural Engineering</i> , <b>2021</b> , 18,	5	4

590	Soft, skin-interfaced sweat stickers for cystic fibrosis diagnosis and management. <i>Science Translational Medicine</i> , <b>2021</b> , 13,	17.5	21
589	Light-activated shape morphing and light-tracking materials using biopolymer-based programmable photonic nanostructures. <i>Nature Communications</i> , <b>2021</b> , 12, 1651	17.4	11
588	Activation of the dorsal, but not the ventral, hippocampus relieves neuropathic pain in rodents. <i>Pain</i> , <b>2021</b> , 162, 2865-2880	8	7
587	Biocompatible Light Guide-Assisted Wearable Devices for Enhanced UV Light Delivery in Deep Skin. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2100576	15.6	9
586	Modeling programmable drug delivery in bioelectronics with electrochemical actuation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	6
585	Wireless skin sensors for physiological monitoring of infants in low-income and middle-income countries. <i>The Lancet Digital Health</i> , <b>2021</b> , 3, e266-e273	14.4	9
584	A skin-conformable wireless sensor to objectively quantify symptoms of pruritus. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	10
583	Recent progress, challenges, and opportunities for wearable biochemical sensors for sweat analysis. <i>Sensors and Actuators B: Chemical</i> , <b>2021</b> , 332,	8.5	43
582	Automated, multiparametric monitoring of respiratory biomarkers and vital signs in clinical and home settings for COVID-19 patients. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	16
581	Transparent, Compliant 3D Mesostructures for Precise Evaluation of Mechanical Characteristics of Organoids. <i>Advanced Materials</i> , <b>2021</b> , 33, e2100026	24	8
580	Wireless multilateral devices for optogenetic studies of individual and social behaviors. <i>Nature Neuroscience</i> , <b>2021</b> , 24, 1035-1045	25.5	31
579	Compliant 3D frameworks instrumented with strain sensors for characterization of millimeter-scale engineered muscle tissues. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	6
578	Comprehensive pregnancy monitoring with a network of wireless, soft, and flexible sensors in high- and low-resource health settings. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	8
577	Surgical implantation of wireless, battery-free optoelectronic epidural implants for optogenetic manipulation of spinal cord circuits in mice. <i>Nature Protocols</i> , <b>2021</b> , 16, 3072-3088	18.8	4
576	Miniaturized electromechanical devices for the characterization of the biomechanics of deep tissue. <i>Nature Biomedical Engineering</i> , <b>2021</b> , 5, 759-771	19	25
575	Real-Time UV Measurement With a Sun Protection System for Warning Young Adults About Sunburn: Prospective Cohort Study. <i>JMIR MHealth and UHealth</i> , <b>2021</b> , 9, e25895	5.5	0
574	Wireless, Skin-Interfaced Devices for Pediatric Critical Care: Application to Continuous, Noninvasive Blood Pressure Monitoring. <i>Advanced Healthcare Materials</i> , <b>2021</b> , 10, e2100383	10.1	8
573	Advanced Materials in Wireless, Implantable Electrical Stimulators that Offer Rapid Rates of Bioresorption for Peripheral Axon Regeneration. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2102724	15.6	5

572	Differential cardiopulmonary monitoring system for artifact-canceled physiological tracking of athletes, workers, and COVID-19 patients. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	11
571	3D Microstructures: Transparent, Compliant 3D Mesostructures for Precise Evaluation of Mechanical Characteristics of Organoids (Adv. Mater. 25/2021). <i>Advanced Materials</i> , <b>2021</b> , 33, 2170196	24	
570	Measurement of Blood Pressure via a Skin-Mounted, Non-Invasive Pressure Sensor. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2021</b> , 88,	2.7	2
569	Mechanics of encapsulated three-dimensional structures for simultaneous sensing of pressure and shear stress. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2021</b> , 151, 104400	5	3
568	Fully implantable and bioresorbable cardiac pacemakers without leads or batteries. <i>Nature Biotechnology</i> , <b>2021</b> , 39, 1228-1238	44.5	38
567	Photocurable bioresorbable adhesives as functional interfaces between flexible bioelectronic devices and soft biological tissues. <i>Nature Materials</i> , <b>2021</b> , 20, 1559-1570	27	29
566	Physically transient electronic materials and devices. <i>Materials Science and Engineering Reports</i> , <b>2021</b> , 145, 100624	30.9	11
565	Wireless, battery-free, subdermally implantable platforms for transcranial and long-range optogenetics in freely moving animals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	7
564	Rapid Capture and Extraction of Sweat for Regional Rate and Cytokine Composition Analysis Using a Wearable Soft Microfluidic System. <i>Journal of Investigative Dermatology</i> , <b>2021</b> , 141, 433-437.e3	4.3	7
563	Performance Evaluation of a Wearable Tattoo Electrode Suitable for High-Resolution Surface Electromyogram Recording. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2021</b> , 68, 1389-1398	5	5
562	Automated Atrial Fibrillation Detection using a Hybrid CNN-LSTM Network on Imbalanced ECG Datasets. <i>Biomedical Signal Processing and Control</i> , <b>2021</b> , 63, 102194	4.9	42
561	Skin-Interfaced Microfluidic Systems that Combine Hard and Soft Materials for Demanding Applications in Sweat Capture and Analysis. <i>Advanced Healthcare Materials</i> , <b>2021</b> , 10, e2000722	10.1	18
560	Designing Mechanical Metamaterials with Kirigami-Inspired, Hierarchical Constructions for Giant Positive and Negative Thermal Expansion. <i>Advanced Materials</i> , <b>2021</b> , 33, e2004919	24	17
559	Bioresorbable Microdroplet Lasers as Injectable Systems for Transient Thermal Sensing and Modulation. <i>ACS Nano</i> , <b>2021</b> , 15, 2327-2339	16.7	10
558	Kangaroo father care: A pilot feasibility study of physiologic, biologic, and psychosocial measures to capture the effects of father-infant and mother-infant skin-to-skin contact in the Neonatal Intensive Care Unit. <i>Developmental Psychobiology</i> , <b>2021</b> , 63, 1521-1533	3	4
557	Bioresorbable Metals for Biomedical Applications: From Mechanical Components to Electronic Devices. <i>Advanced Healthcare Materials</i> , <b>2021</b> , 10, e2002236	10.1	8
556	Wireless, implantable catheter-type oximeter designed for cardiac oxygen saturation. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	15
555	Theoretical modeling of tunable vibrations of three-dimensional serpentine structures for simultaneous measurement of adherent cell mass and modulus. <i>MRS Bulletin</i> , <b>2021</b> , 46, 107-114	3.2	5

554	Wireless and battery-free technologies for neuroengineering. <i>Nature Biomedical Engineering</i> , <b>2021</b> ,	19	26
553	Three-dimensional, multifunctional neural interfaces for cortical spheroids and engineered assembloids. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	38
552	Advanced Machine Learning Tools to Monitor Biomarkers of Dysphagia: A Wearable Sensor Proof-of-Concept Study. <i>Digital Biomarkers</i> , <b>2021</b> , 5, 167-175	7.1	3
551	Bitter Flavored, Soft Composites for Wearables Designed to Reduce Risks of Choking in Infants. <i>Advanced Materials</i> , <b>2021</b> , 33, e2103857	24	4
550	Wireless, battery-free, and fully implantable electrical neurostimulation in freely moving rodents. <i>Microsystems and Nanoengineering</i> , <b>2021</b> , 7, 62	7.7	6
549	Battery-free, wireless soft sensors for continuous multi-site measurements of pressure and temperature from patients at risk for pressure injuries. <i>Nature Communications</i> , <b>2021</b> , 12, 5008	17.4	21
548	State of Sweat: Emerging Wearable Systems for Real-Time, Noninvasive Sweat Sensing and Analytics. <i>ACS Sensors</i> , <b>2021</b> , 6, 2787-2801	9.2	23
547	Functional Materials and Devices for XR (VR/AR/MR) Applications. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2106546	15.6	8
546	Wireless, Accumulation Mode Dosimeters for Monitoring Pulsed and Non-Pulsed Germicidal Lamps. <i>IEEE Sensors Journal</i> , <b>2021</b> , 21, 18706-18714	4	
545	Skin-Integrated Devices with Soft, Holey Architectures for Wireless Physiological Monitoring, With Applications in the Neonatal Intensive Care Unit. <i>Advanced Materials</i> , <b>2021</b> , 33, e2103974	24	5
544	Skin-Integrated Vibrotactile Interfaces for Virtual and Augmented Reality (Adv. Funct. Mater. 39/2021). <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2170291	15.6	0
543	Three-dimensional electronic microfliers inspired by wind-dispersed seeds. <i>Nature</i> , <b>2021</b> , 597, 503-510	50.4	28
542	A mechanics model for injectable microsystems in drug delivery. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2021</b> , 156, 104622	5	2
541	Three dimensional bioelectronic interfaces to small-scale biological systems. <i>Current Opinion in Biotechnology</i> , <b>2021</b> , 72, 1-7	11.4	2
540	Wireless, soft electronics for rapid, multisensor measurements of hydration levels in healthy and diseased skin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	15
539	Rapid Screening of Physiological Changes Associated With COVID-19 Using Soft-Wearables and Structured Activities: A Pilot Study. <i>IEEE Journal of Translational Engineering in Health and Medicine</i> , <b>2021</b> , 9, 4900311	3	13
538	Bioresorbable Multilayer Photonic Cavities as Temporary Implants for Tether-Free Measurements of Regional Tissue Temperatures. <i>BME Frontiers</i> , <b>2021</b> , 2021, 1-14	4.4	2
537	Water-soluble energy harvester as a promising power solution for temporary electronic implants. <i>APL Materials</i> , <b>2020</b> , 8, 120701	5.7	4

536	Wireless sensors for continuous, multimodal measurements at the skin interface with lower limb prostheses. <i>Science Translational Medicine</i> , <b>2020</b> , 12,	17.5	39
535	Skin-Integrated Vibrotactile Interfaces for Virtual and Augmented Reality. <i>Advanced Functional Materials</i> , <b>2020</b> , 31, 2008805	15.6	23
534	Skin-interfaced microfluidic system with personalized sweating rate and sweat chloride analytics for sports science applications. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	32
533	Assembly of Foldable 3D Microstructures Using Graphene Hinges. <i>Advanced Materials</i> , <b>2020</b> , 32, e2001303	14	19
532	Materials for flexible bioelectronic systems as chronic neural interfaces. <i>Nature Materials</i> , <b>2020</b> , 19, 590-603	10.3	127
531	Mechanics and deformation of shape memory polymer kirigami microstructures. <i>Extreme Mechanics Letters</i> , <b>2020</b> , 39, 100831	3.9	8
530	Chemical Funneling of Colloidal Gold Nanoparticles on Printed Arrays of End-Grafted Polymers for Plasmonic Applications. <i>ACS Nano</i> , <b>2020</b> , 14, 8276-8286	16.7	17
529	Interface Engineering of Si Hybrid Nanostructures for Chemical and Biological Sensing. <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 2000380	6.8	7
528	Biodegradable Polyanhydrides as Encapsulation Layers for Transient Electronics. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2000941	15.6	32
527	Continuous, noninvasive wireless monitoring of flow of cerebrospinal fluid through shunts in patients with hydrocephalus. <i>Npj Digital Medicine</i> , <b>2020</b> , 3, 29	15.7	14
526	Skin-interfaced biosensors for advanced wireless physiological monitoring in neonatal and pediatric intensive-care units. <i>Nature Medicine</i> , <b>2020</b> , 26, 418-429	50.5	134
525	Excitatory VTA to DH projections provide a valence signal to memory circuits. <i>Nature Communications</i> , <b>2020</b> , 11, 1466	17.4	8
524	Emerging Modalities and Implantable Technologies for Neuromodulation. <i>Cell</i> , <b>2020</b> , 181, 115-135	56.2	64
523	Bioresorbable, Wireless, Passive Sensors as Temporary Implants for Monitoring Regional Body Temperature. <i>Advanced Healthcare Materials</i> , <b>2020</b> , 9, e2000942	10.1	35
522	Inverse Design Strategies for 3D Surfaces Formed by Mechanically Guided Assembly. <i>Advanced Materials</i> , <b>2020</b> , 32, e1908424	24	19
521	Kirigami-Inspired Self-Assembly of 3D Structures. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1909888	15.6	16
520	The effect of defects on the cyclic behavior of polymeric 3D kirigami structures. <i>Extreme Mechanics Letters</i> , <b>2020</b> , 36, 100650	3.9	7
519	Materials, Mechanics Designs, and Bioresorbable Multisensor Platforms for Pressure Monitoring in the Intracranial Space. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1910718	15.6	29

518	Inorganic materials for transient electronics in biomedical applications. <i>MRS Bulletin</i> , <b>2020</b> , 45, 103-112	3.2	29
517	Wireless, battery-free subdermally implantable photometry systems for chronic recording of neural dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 2835-2845	11.5	55
516	Three-dimensional electronic scaffolds for monitoring and regulation of multifunctional hybrid tissues. <i>Extreme Mechanics Letters</i> , <b>2020</b> , 35, 100634	3.9	24
515	Inverse Design Methods: Inverse Design Strategies for 3D Surfaces Formed by Mechanically Guided Assembly (Adv. Mater. 14/2020). <i>Advanced Materials</i> , <b>2020</b> , 32, 2070107	24	
514	Development of a neural interface for high-definition, long-term recording in rodents and nonhuman primates. <i>Science Translational Medicine</i> , <b>2020</b> , 12,	17.5	64
513	Role of data measurement characteristics in the accurate detection of Parkinson's disease symptoms using wearable sensors. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2020</b> , 17, 52	5.3	18
512	Biofluid Barrier Materials and Encapsulation Strategies for Flexible, Chronically Stable Neural Interfaces <b>2020</b> , 267-280		
511	A Microthermal Sensor for Cryoablation Balloons. <i>Journal of Biomechanical Engineering</i> , <b>2020</b> , 142,	2.1	1
510	Flexible and Stretchable Antennas for Biointegrated Electronics. <i>Advanced Materials</i> , <b>2020</b> , 32, e1902767	4	90
509	Soft, skin-interfaced microfluidic systems with integrated enzymatic assays for measuring the concentration of ammonia and ethanol in sweat. <i>Lab on A Chip</i> , <b>2020</b> , 20, 84-92	7.2	34
508	Nanofabrication approaches for functional three-dimensional architectures. <i>Nano Today</i> , <b>2020</b> , 30, 100825	9	20
507	Mechano-acoustic sensing of physiological processes and body motions via a soft wireless device placed at the suprasternal notch. <i>Nature Biomedical Engineering</i> , <b>2020</b> , 4, 148-158	19	109
506	Soft Wearable Systems for Colorimetric and Electrochemical Analysis of Biofluids. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1907269	15.6	41
505	Ultrathin, High Capacitance Capping Layers for Silicon Electronics with Conductive Interconnects in Flexible, Long-Lived Bioimplants. <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 1900800	6.8	12
504	Advances in Physicochemically Stimuli-Responsive Materials for On-Demand Transient Electronic Systems. <i>Matter</i> , <b>2020</b> , 3, 1031-1052	12.7	17
503	Skin-interfaced soft microfluidic systems with modular and reusable electronics for capacitive sensing of sweat loss, rate and conductivity. <i>Lab on A Chip</i> , <b>2020</b> , 20, 4391-4403	7.2	9
502	Sweat-activated biocompatible batteries for epidermal electronic and microfluidic systems. <i>Nature Electronics</i> , <b>2020</b> , 3, 554-562	28.4	48
501	Recent advances in neurotechnologies with broad potential for neuroscience research. <i>Nature Neuroscience</i> , <b>2020</b> , 23, 1522-1536	25.5	42

500	Stretchable, dynamic covalent polymers for soft, long-lived bioresorbable electronic stimulators designed to facilitate neuromuscular regeneration. <i>Nature Communications</i> , <b>2020</b> , 11, 5990	17.4	58
499	A wireless, skin-interfaced biosensor for cerebral hemodynamic monitoring in pediatric care. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 31674-31684	11.5	21
498	Reliable, low-cost, fully integrated hydration sensors for monitoring and diagnosis of inflammatory skin diseases in any environment. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	18
497	Wireless, skin-interfaced sensors for compression therapy. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	26
496	Bioresorbable Wireless Sensors as Temporary Implants for In Vivo Measurements of Pressure. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2003754	15.6	21
495	Modeling, design guidelines, and detection limits of self-powered enzymatic biofuel cell-based sensors. <i>Biosensors and Bioelectronics</i> , <b>2020</b> , 168, 112493	11.8	12
494	Can mHealth Technology Help Mitigate the Effects of the COVID-19 Pandemic?. <i>IEEE Open Journal of Engineering in Medicine and Biology</i> , <b>2020</b> , 1, 243-248	5.9	33
493	Soft, skin-interfaced microfluidic systems with integrated immunoassays, fluorometric sensors, and impedance measurement capabilities. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 27906-27915	11.5	35
492	Stretchable Bioelectronics: A Versatile Sacrificial Layer for Transfer Printing of Wide Bandgap Materials for Implantable and Stretchable Bioelectronics (Adv. Funct. Mater. 43/2020). <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2070287	15.6	0
491	Wirelessly controlled, bioresorbable drug delivery device with active valves that exploit electrochemically triggered crevice corrosion. <i>Science Advances</i> , <b>2020</b> , 6, eabb1093	14.3	35
490	A Versatile Sacrificial Layer for Transfer Printing of Wide Bandgap Materials for Implantable and Stretchable Bioelectronics. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2004655	15.6	18
489	Catheter-integrated soft multilayer electronic arrays for multiplexed sensing and actuation during cardiac surgery. <i>Nature Biomedical Engineering</i> , <b>2020</b> , 4, 997-1009	19	74
488	Mechanically-Guided Structural Designs in Stretchable Inorganic Electronics. <i>Advanced Materials</i> , <b>2020</b> , 32, e1902254	24	104
487	Skin sensors are the future of health care. <i>Nature</i> , <b>2019</b> , 571, 319-321	50.4	78
486	Bio-Integrated Wearable Systems: A Comprehensive Review. <i>Chemical Reviews</i> , <b>2019</b> , 119, 5461-5533	68.1	496
485	Mechanics of buckled serpentine structures formed via mechanics-guided, deterministic three-dimensional assembly. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2019</b> , 125, 736-748	5	20
484	Soft, Skin-Integrated Multifunctional Microfluidic Systems for Accurate Colorimetric Analysis of Sweat Biomarkers and Temperature. <i>ACS Sensors</i> , <b>2019</b> , 4, 379-388	9.2	134
483	Waterproof, electronics-enabled, epidermal microfluidic devices for sweat collection, biomarker analysis, and thermography in aquatic settings. <i>Science Advances</i> , <b>2019</b> , 5, eaau6356	14.3	142



482	Multimodal Sensing with a Three-Dimensional Piezoresistive Structure. <i>ACS Nano</i> , <b>2019</b> , 13, 10972-10979	6.7	75
481	Soft, Skin-Interfaced Microfluidic Systems with Passive Galvanic Stopwatches for Precise Chronometric Sampling of Sweat. <i>Advanced Materials</i> , <b>2019</b> , 31, e1902109	24	42
480	Buckling and twisting of advanced materials into morphable 3D mesostructures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 13239-13248	11.5	51
479	Barrier materials for flexible bioelectronic implants with chronic stability. Current approaches and future directions. <i>APL Materials</i> , <b>2019</b> , 7, 050902	5.7	23
478	Flexible Inorganic Light Emitting Diodes Enabled by New Materials and Designs, With Examples of Their Use in Neuroscience Research <b>2019</b> , 1-39		
477	Mechanics of bistable cross-shaped structures through loading-path controlled 3D assembly. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2019</b> , 129, 261-277	5	22
476	Wearable Bioelectronics: Opportunities for Chemistry. <i>Accounts of Chemical Research</i> , <b>2019</b> , 52, 521-522	24.3	32
475	Thermal transport in layer-by-layer assembled polycrystalline graphene films. <i>Npj 2D Materials and Applications</i> , <b>2019</b> , 3,	8.8	21
474	Binodal, wireless epidermal electronic systems with in-sensor analytics for neonatal intensive care. <i>Science</i> , <b>2019</b> , 363,	33.3	316
473	Wireless, battery-free optoelectronic systems as subdermal implants for local tissue oximetry. <i>Science Advances</i> , <b>2019</b> , 5, eaaw0873	14.3	65
472	Materials for biointegrated electronic and microfluidic systems. <i>MRS Bulletin</i> , <b>2019</b> , 44, 195-202	3.2	5
471	Passive sweat collection and colorimetric analysis of biomarkers relevant to kidney disorders using a soft microfluidic system. <i>Lab on A Chip</i> , <b>2019</b> , 19, 1545-1555	7.2	91
470	Soft, skin-interfaced wearable systems for sports science and analytics. <i>Current Opinion in Biomedical Engineering</i> , <b>2019</b> , 9, 47-56	4.4	51
469	Bioresorbable photonic devices for the spectroscopic characterization of physiological status and neural activity. <i>Nature Biomedical Engineering</i> , <b>2019</b> , 3, 644-654	19	58
468	Long-Lived, Transferred Crystalline Silicon Carbide Nanomembranes for Implantable Flexible Electronics. <i>ACS Nano</i> , <b>2019</b> , 13, 11572-11581	16.7	65
467	Flexible electronic/optoelectronic microsystems with scalable designs for chronic biointegration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 15398-15406	11.5	44
466	Harnessing the interface mechanics of hard films and soft substrates for 3D assembly by controlled buckling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 15368-15377	11.5	49
465	Transformable, Freestanding 3D Mesostructures Based on Transient Materials and Mechanical Interlocking. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1903181	15.6	13

464	Body-Interfaced Chemical Sensors for Noninvasive Monitoring and Analysis of Biofluids. <i>Trends in Chemistry</i> , <b>2019</b> , 1, 559-571	14.8	47
463	Bioresorbable optical sensor systems for monitoring of intracranial pressure and temperature. <i>Science Advances</i> , <b>2019</b> , 5, eaaw1899	14.3	85
462	Battery-free, fully implantable optofluidic cuff system for wireless optogenetic and pharmacological neuromodulation of peripheral nerves. <i>Science Advances</i> , <b>2019</b> , 5, eaaw5296	14.3	79
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460	A Bioresorbable Magnetically Coupled System for Low-Frequency Wireless Power Transfer. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1905451	15.6	35
459	Remotely Triggered Assembly of 3D Mesostructures Through Shape-Memory Effects. <i>Advanced Materials</i> , <b>2019</b> , 31, e1905715	24	27
458	4D Electronic Systems: Transformable, Freestanding 3D Mesostructures Based on Transient Materials and Mechanical Interlocking (Adv. Funct. Mater. 40/2019). <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1970277	15.6	
457	Transient Light-Emitting Diodes Constructed from Semiconductors and Transparent Conductors that Biodegrade Under Physiological Conditions. <i>Advanced Materials</i> , <b>2019</b> , 31, e1902739	24	25
456	2D Mechanical Metamaterials with Widely Tunable Unusual Modes of Thermal Expansion. <i>Advanced Materials</i> , <b>2019</b> , 31, e1905405	24	35
455	Augmenting Clinical Outcome Measures of Gait and Balance with a Single Inertial Sensor in Age-Ranged Healthy Adults. <i>Sensors</i> , <b>2019</b> , 19,	3.8	9
454	Counting Bites With Bits: Expert Workshop Addressing Calorie and Macronutrient Intake Monitoring. <i>Journal of Medical Internet Research</i> , <b>2019</b> , 21, e14904	7.6	9
453	Large-area MRI-compatible epidermal electronic interfaces for prosthetic control and cognitive monitoring. <i>Nature Biomedical Engineering</i> , <b>2019</b> , 3, 194-205	19	144
452	Wearable Sensors for Biochemical Sweat Analysis. <i>Annual Review of Analytical Chemistry</i> , <b>2019</b> , 12, 1-22	12.5	157
451	Skin-integrated wireless haptic interfaces for virtual and augmented reality. <i>Nature</i> , <b>2019</b> , 575, 473-479	50.4	307
450	Automating sleep stage classification using wireless, wearable sensors. <i>Npj Digital Medicine</i> , <b>2019</b> , 2, 131	15.7	27
449	Integrated Bioresorbable Optical Sensor Systems for Biomedical Pressure and Temperature Monitoring <b>2019</b> ,		1
448	Recent advances of biosensors for hypertension and nephrology. <i>Current Opinion in Nephrology and Hypertension</i> , <b>2019</b> , 28, 390-396	3.5	8
447	Resettable skin interfaced microfluidic sweat collection devices with chemesthetic hydration feedback. <i>Nature Communications</i> , <b>2019</b> , 10, 5513	17.4	39

446	Wireless, battery-free, fully implantable multimodal and multisite pacemakers for applications in small animal models. <i>Nature Communications</i> , <b>2019</b> , 10, 5742	17.4	72
445	Miniaturized, light-adaptive, wireless dosimeters autonomously monitor exposure to electromagnetic radiation. <i>Science Advances</i> , <b>2019</b> , 5, eaay2462	14.3	12
444	A wireless closed-loop system for optogenetic peripheral neuromodulation. <i>Nature</i> , <b>2019</b> , 565, 361-365	50.4	217
443	Fabrication and Mechanical Cycling of Polymer Microscale Architectures for 3D MEMS Sensors. <i>Advanced Engineering Materials</i> , <b>2019</b> , 21, 1801254	3.5	6
442	High Performance, Tunable Electrically Small Antennas through Mechanically Guided 3D Assembly. <i>Small</i> , <b>2019</b> , 15, e1804055	11	44
441	Theoretical Insight into the Au(I)-Catalyzed Intermolecular Condensation of Homopropargyl Alcohols with Terminal Alkynes: Reactant Stoichiometric Ratio-Controlled Chemodivergence. <i>Journal of Organic Chemistry</i> , <b>2019</b> , 84, 579-588	4.2	3
440	Soft Three-Dimensional Microscale Vibratory Platforms for Characterization of Nano-Thin Polymer Films. <i>ACS Nano</i> , <b>2019</b> , 13, 449-457	16.7	16
439	Ultrathin, Transferred Layers of Metal Silicide as Faradaic Electrical Interfaces and Biofluid Barriers for Flexible Bioelectronic Implants. <i>ACS Nano</i> , <b>2019</b> , 13, 660-670	16.7	24
438	Mechano-Plastic Pyrolysis of Dynamic Covalent Polymer Network toward Hierarchical 3D Ceramics. <i>Advanced Materials</i> , <b>2019</b> , 31, e1807326	24	36
437	Battery-free, skin-interfaced microfluidic/electronic systems for simultaneous electrochemical, colorimetric, and volumetric analysis of sweat. <i>Science Advances</i> , <b>2019</b> , 5, eaav3294	14.3	299
436	A Generic Soft Encapsulation Strategy for Stretchable Electronics. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1806630	15.6	55
435	Three-dimensional piezoelectric polymer microsystems for vibrational energy harvesting, robotic interfaces and biomedical implants. <i>Nature Electronics</i> , <b>2019</b> , 2, 26-35	28.4	209
434	Freestanding 3D Mesostructures, Functional Devices, and Shape-Programmable Systems Based on Mechanically Induced Assembly with Shape Memory Polymers. <i>Advanced Materials</i> , <b>2019</b> , 31, e1805615	24	72
433	Materials and Designs for Power Supply Systems in Skin-Interfaced Electronics. <i>Accounts of Chemical Research</i> , <b>2019</b> , 52, 53-62	24.3	44
432	Recent Advances in Flexible Inorganic Light Emitting Diodes: From Materials Design to Integrated Optoelectronic Platforms. <i>Advanced Optical Materials</i> , <b>2019</b> , 7, 1800936	8.1	46
431	Bioresorbable pressure sensors protected with thermally grown silicon dioxide for the monitoring of chronic diseases and healing processes. <i>Nature Biomedical Engineering</i> , <b>2019</b> , 3, 37-46	19	115
430	Needle-shaped ultrathin piezoelectric microsystem for guided tissue targeting via mechanical sensing. <i>Nature Biomedical Engineering</i> , <b>2018</b> , 2, 165-172	19	71
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428	Battery-free, wireless sensors for full-body pressure and temperature mapping. <i>Science Translational Medicine</i> , <b>2018</b> , 10,	17.5	176
427	Measuring fine-grained heart-rate using a flexible wearable sensor in the presence of noise <b>2018</b> ,		3
426	Three-Dimensional Silicon Electronic Systems Fabricated by Compressive Buckling Process. <i>ACS Nano</i> , <b>2018</b> , 12, 4164-4171	16.7	23
425	Two-dimensional materials in functional three-dimensional architectures with applications in photodetection and imaging. <i>Nature Communications</i> , <b>2018</b> , 9, 1417	17.4	136
424	Biodegradable Monocrystalline Silicon Photovoltaic Microcells as Power Supplies for Transient Biomedical Implants. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1703035	21.8	63
423	Skin-interfaced systems for sweat collection and analytics. <i>Science Advances</i> , <b>2018</b> , 4, eaar3921	14.3	217
422	Super-Absorbent Polymer Valves and Colorimetric Chemistries for Time-Sequenced Discrete Sampling and Chloride Analysis of Sweat via Skin-Mounted Soft Microfluidics. <i>Small</i> , <b>2018</b> , 14, e1703334 <sup>11</sup>		81
421	Morphable 3D mesostructures and microelectronic devices by multistable buckling mechanics. <i>Nature Materials</i> , <b>2018</b> , 17, 268-276	27	216
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419	Fabrication and Deformation of 3D Multilayered Kirigami Microstructures. <i>Small</i> , <b>2018</b> , 14, e1703852	11	21
418	Highly flexible, wearable, and disposable cardiac biosensors for remote and ambulatory monitoring. <i>Npj Digital Medicine</i> , <b>2018</b> , 1, 2	15.7	103
417	Biodegradable Electronic Systems in 3D, Heterogeneously Integrated Formats. <i>Advanced Materials</i> , <b>2018</b> , 30, 1704955	24	52
416	Implantable, wireless device platforms for neuroscience research. <i>Current Opinion in Neurobiology</i> , <b>2018</b> , 50, 42-49	7.6	71
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403	Soft, stretchable, epidermal sensor with integrated electronics and photochemistry for measuring personal UV exposures. <i>PLoS ONE</i> , <b>2018</b> , 13, e0190233	3.7	31
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375	Controlled mechanical assembly of complex 3D mesostructures and strain sensors by tensile buckling. <i>Npj Flexible Electronics</i> , <b>2018</b> , 2,	10.7	17

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369	Chemical Sensing Systems that Utilize Soft Electronics on Thin Elastomeric Substrates with Open Cellular Designs. <i>Advanced Functional Materials</i> , <b>2017</b> , 9, 1605476	15.6	51
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361	Design and application of 'J-shaped' stress-strain behavior in stretchable electronics: a review. <i>Lab on A Chip</i> , <b>2017</b> , 17, 1689-1704	7.2	99
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349	Deterministic assembly of 3D mesostructures in advanced materials via compressive buckling: A short review of recent progress. <i>Extreme Mechanics Letters</i> , <b>2017</b> , 11, 96-104	3.9	56
348	Oximetry: Miniaturized Battery-Free Wireless Systems for Wearable Pulse Oximetry (Adv. Funct. Mater. 1/2017). <i>Advanced Functional Materials</i> , <b>2017</b> , 27,	15.6	3
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325	Multimodal epidermal devices for hydration monitoring. <i>Microsystems and Nanoengineering</i> , <b>2017</b> , 3, 17014	7.7	40
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321	Transparent and Foldable Electronics Enabled by Si Nanomembranes <b>2016</b> , 57-88		

320	High-Speed, Flexible Electronics by Use of Si Nanomembranes <b>2016</b> , 113-142		1
319	Flexible Si Nanomembrane Sensor for Human-Machine Interface <b>2016</b> , 169-202		1
318	Flexible and Transparent Solar Cells Using Si Nanomembranes <b>2016</b> , 203-240		1
317	Synthesis, Assembly, and Applications of Semiconductor Nanomembranes <b>2016</b> , 1-36		1
316	High-Performance Flexible Electronic and Optoelectronic Devices by Mechanical Exfoliation from a Brittle Substrate <b>2016</b> , 89-112		
315	Nanomembranes as Protein Mass Spectrometers <b>2016</b> , 257-270		
314	Semiconductor Nanomembranes for Fano Resonance Photonic Crystal Devices <b>2016</b> , 271-304		1
313	Acoustic Phonons in Ultrathin Free-Standing Silicon Membranes <b>2016</b> , 305-326		1
312	Thermoelectric Performance of Silicon Nanostructures <b>2016</b> , 327-342		
311	Silicon Nanomembranes for Efficient and Precise Molecular Separations <b>2016</b> , 241-256		
310	Electrodes: Ferromagnetic, Folded Electrode Composite as a Soft Interface to the Skin for Long-Term Electrophysiological Recording (Adv. Funct. Mater. 40/2016). <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 7280-7280	15.6	
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308	Battery-free, stretchable optoelectronic systems for wireless optical characterization of the skin. <i>Science Advances</i> , <b>2016</b> , 2, e1600418	14.3	266
307	Computational models for the determination of depth-dependent mechanical properties of skin with a soft, flexible measurement device. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2016</b> , 472, 20160225	2.4	13
306	Novel materials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 11667-11669	11.5	3
305	Soft electronics for the human body <b>2016</b> ,		1
304	Ultrathin, transferred layers of thermally grown silicon dioxide as biofluid barriers for biointegrated flexible electronic systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 11682-11687	11.5	133
303	Mechanical assembly of complex, 3D mesostructures from releasable multilayers of advanced materials. <i>Science Advances</i> , <b>2016</b> , 2, e1601014	14.3	152

302	Porous Silicon Gradient Refractive Index Micro-Optics. <i>Nano Letters</i> , <b>2016</b> , 16, 7402-7407	11.5	21
301	Design of Strain-Limiting Substrate Materials for Stretchable and Flexible Electronics. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 5345-5351	15.6	75
300	3D Assembly: Controlled Mechanical Buckling for Origami-Inspired Construction of 3D Microstructures in Advanced Materials (Adv. Funct. Mater. 16/2016). <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 2586-2586	15.6	
299	Ultrathin Injectable Sensors of Temperature, Thermal Conductivity, and Heat Capacity for Cardiac Ablation Monitoring. <i>Advanced Healthcare Materials</i> , <b>2016</b> , 5, 373-81	10.1	36
298	Epidermal electronics for electromyography: An application to swallowing therapy. <i>Medical Engineering and Physics</i> , <b>2016</b> , 38, 807-12	2.4	31
297	Recent progress in flexible and stretchable piezoelectric devices for mechanical energy harvesting, sensing and actuation. <i>Extreme Mechanics Letters</i> , <b>2016</b> , 9, 269-281	3.9	281
296	Bioresorbable silicon electronic sensors for the brain. <i>Nature</i> , <b>2016</b> , 530, 71-6	50.4	582
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293	Flexible Electronics: An Epidermal Stimulation and Sensing Platform for Sensorimotor Prosthetic Control, Management of Lower Back Exertion, and Electrical Muscle Activation (Adv. Mater. 22/2016). <i>Advanced Materials</i> , <b>2016</b> , 28, 4563	24	6
292	Controlled mechanical buckling for origami-inspired construction of 3D microstructures in advanced materials. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 2629-2639	15.6	188
291	An Epidermal Stimulation and Sensing Platform for Sensorimotor Prosthetic Control, Management of Lower Back Exertion, and Electrical Muscle Activation. <i>Advanced Materials</i> , <b>2016</b> , 28, 4462-71	24	173
290	Stretchable multichannel antennas in soft wireless optoelectronic implants for optogenetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, E8169-E8177	11.5	84
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283	Origami MEMS and NEMS. <i>MRS Bulletin</i> , <b>2016</b> , 41, 123-129	3.2	211
282	A nonlinear mechanics model of bio-inspired hierarchical lattice materials consisting of horseshoe microstructures. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2016</b> , 90, 179-202	5	155
281	Multilayer Transfer Printing for Pixelated, Multicolor Quantum Dot Light-Emitting Diodes. <i>ACS Nano</i> , <b>2016</b> , 10, 4920-5	16.7	85
280	Bioresorbable silicon electronics for transient spatiotemporal mapping of electrical activity from the cerebral cortex. <i>Nature Materials</i> , <b>2016</b> , 15, 782-791	27	296
279	Ferromagnetic, folded electrode composite as a soft interface to the skin for long-term electrophysiological recording. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 7281-7290	15.6	40
278	Wrinkling of a stiff thin film bonded to a pre-strained, compliant substrate with finite thickness. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2016</b> , 472, 20160339 <sup>2-4</sup>	2.4	20
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276	Theoretical and Experimental Studies of Epidermal Heat Flux Sensors for Measurements of Core Body Temperature. <i>Advanced Healthcare Materials</i> , <b>2016</b> , 5, 119-27	10.1	83
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270	Wireless Optofluidic Systems for Programmable In Vivo Pharmacology and Optogenetics. <i>Cell</i> , <b>2015</b> , 162, 662-74	56.2	326
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265	Soft network composite materials with deterministic and bio-inspired designs. <i>Nature Communications</i> , <b>2015</b> , 6, 6566	17.4	289
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262	Biodegradable Thin Metal Foils and Spin-On Glass Materials for Transient Electronics. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 1789-1797	15.6	101
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260	Optodynamic simulation of Adrenergic receptor signalling. <i>Nature Communications</i> , <b>2015</b> , 6, 8480	17.4	66
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252	Distinct Subpopulations of Nucleus Accumbens Dynorphin Neurons Drive Aversion and Reward. <i>Neuron</i> , <b>2015</b> , 87, 1063-77	13.9	197
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245	Transient Electronics: Thermally Triggered Degradation of Transient Electronic Devices (Adv. Mater. 25/2015). <i>Advanced Materials</i> , <b>2015</b> , 27, 3782-3782	24	
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220	Mechanisms for hydrolysis of silicon nanomembranes as used in bioresorbable electronics. <i>Advanced Materials</i> , <b>2015</b> , 27, 1857-64	24	77
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192	Conformable amplified lead zirconate titanate sensors with enhanced piezoelectric response for cutaneous pressure monitoring. <i>Nature Communications</i> , <b>2014</b> , 5, 4496	17.4	571
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185	Mechanics Design for Stretchable, High Areal Coverage GaAs Solar Module on an Ultrathin Substrate. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2014</b> , 81,	2.7	20
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182	Multifunctional skin-like electronics for quantitative, clinical monitoring of cutaneous wound healing. <i>Advanced Healthcare Materials</i> , <b>2014</b> , 3, 1597-607	10.1	175
181	Dissolution Behaviors and Applications of Silicon Oxides and Nitrides in Transient Electronics. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 4427-4434	15.6	170
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173	Epidermal impedance sensing sheets for precision hydration assessment and spatial mapping. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2013</b> , 60, 2848-57	5	76
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