

Fully implantable and bioresorbable cardiac pacemaker

Nature Biotechnology

39, 1228-1238

DOI: [10.1038/s41587-021-00948-x](https://doi.org/10.1038/s41587-021-00948-x)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Fully bioresorbable, battery-free pacemakers. <i>Nature Reviews Cardiology</i> , 2021, 18, 611-611.	6.1	0
2	Advances in Implantable Optogenetic Technology for Cardiovascular Research and Medicine. <i>Frontiers in Physiology</i> , 2021, 12, 720190.	1.3	8
3	Risk of permanent pacemaker implantation after transcatheter aortic valve replacement: How do we manage beyond risk assessment?. <i>Journal of Cardiac Surgery</i> , 2021, , .	0.3	0
4	Recent Progress in Materials Chemistry to Advance Flexible Bioelectronics in Medicine. <i>Advanced Materials</i> , 2022, 34, e2106787.	11.1	44
5	Challenges and emerging opportunities in transistor-based ultrathin electronics: design and fabrication for healthcare applications. <i>Journal of Materials Chemistry C</i> , 2022, 10, 2450-2474.	2.7	6
6	Challenges and opportunities in flexible, stretchable and morphable bio-interfaced technologies. <i>National Science Review</i> , 2022, 9, .	4.6	4
7	Biology-guided engineering of bioelectrical interfaces. <i>Nanoscale Horizons</i> , 2022, 7, 94-111.	4.1	5
8	Wearable Pressure Sensors for Pulse Wave Monitoring. <i>Advanced Materials</i> , 2022, 34, e2109357.	11.1	253
9	Smart bioelectronics and biomedical devices. <i>Bio-Design and Manufacturing</i> , 2022, 5, 1-5.	3.9	4
10	Flexible electrochemical sensors integrated with nanomaterials for in situ determination of small molecules in biological samples: A review. <i>Analytica Chimica Acta</i> , 2022, 1207, 339461.	2.6	17
11	Soft bioelectronics for cardiac interfaces. <i>Biophysics Reviews</i> , 2022, 3, .	1.0	8
12	Lab-on-a-Chip Contact Lens: Recent Advances and Future Opportunities in Diagnostics and Therapeutics. <i>Advanced Materials</i> , 2022, 34, e2108389.	11.1	48
13	Bio-inspired ultra-thin microfluidics for soft sweat-activated batteries and skin electronics. <i>Journal of Materials Chemistry A</i> , 2022, 10, 19662-19670.	5.2	5
14	In-Vitro Demonstration of Ultra-Reliable, Wireless and Batteryless Implanted Intracranial Sensors Operated on Loci of Exceptional Points. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2022, 16, 287-295.	2.7	10
15	Topological supramolecular network enabled high-conductivity, stretchable organic bioelectronics. <i>Science</i> , 2022, 375, 1411-1417.	6.0	230
16	Soft wearable devices for deep-tissue sensing. <i>Nature Reviews Materials</i> , 2022, 7, 850-869.	23.3	103
17	Editorial: Highlights in Cardiac Rhythmology: 2021. <i>Frontiers in Cardiovascular Medicine</i> , 2022, 9, 866883.	1.1	0
18	Hybrid Piezoelectret Based Highly Efficient Ultrasonic Energy Harvester for Implantable Electronics. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	34

#	ARTICLE	IF	CITATIONS
19	A programmable pulse generator for atrial pacing in rats for studies on Pulmonary Arterial Hypertension. , 2021, , .		0
20	Micro and nano materials and processing techniques for printed biodegradable electronics. Materials Today Nano, 2022, 18, 100201.	2.3	11
21	Giant Magnetoelastic Effect Enabled Stretchable Sensor for Self-Powered Biomonitoring. ACS Nano, 2022, 16, 6013-6022.	7.3	59
22	Polyvinyl Alcohol/Graphene Oxide Conductive Hydrogels via the Synergy of Freezing and Salting Out for Strain Sensors. Sensors, 2022, 22, 3015.	2.1	27
23	Functional Encapsulating Structure for Wireless and Immediate Monitoring of the Fluid Penetration. Advanced Functional Materials, 2022, 32, .	7.8	6
24	Stretchable, Multi-Layered Stack Antenna for Smart/Wearable Electronic Applications. Materials, 2022, 15, 3275.	1.3	2
25	Gold Nanostrip Array-Mediated Wireless Electrical Stimulation for Accelerating Functional Neuronal Differentiation. Advanced Science, 2022, 9, .	5.6	11
26	A transient, closed-loop network of wireless, body-integrated devices for autonomous electrotherapy. Science, 2022, 376, 1006-1012.	6.0	90
27	Novel implantable devices delivering electrical cues for tissue regeneration and functional restoration. Medicine in Novel Technology and Devices, 2022, 16, 100146.	0.9	5
28	Porosity-based heterojunctions enable leadless optoelectronic modulation of tissues. Nature Materials, 2022, 21, 647-655.	13.3	29
29	Innovation in Cardiovascular Bioelectronics. , 2022, , 587-602.		0
31	Transient, Biodegradable Energy Systems as a Promising Power Solution for Ecofriendly and Implantable Electronics. Advanced Energy and Sustainability Research, 2022, 3, .	2.8	8
32	3R Electronics: Scalable Fabrication of Resilient, Repairable, and Recyclable Soft-Matter Electronics. Advanced Materials, 2022, 34, .	11.1	33
33	Nanomaterials based flexible devices for monitoring and treatment of cardiovascular diseases (CVDs). Nano Research, 2023, 16, 3939-3955.	5.8	5
35	Implantable Electronic Medicine Enabled by Bioresorbable Microneedles for Wireless Electrotherapy and Drug Delivery. Nano Letters, 2022, 22, 5944-5953.	4.5	36
36	Stretchable Sponge Electrodes for Long-Term and Motion-Artifact-Tolerant Recording of High-Quality Electrophysiologic Signals. ACS Nano, 2022, 16, 11792-11801.	7.3	32
37	Remembering the canonical discoverers of the core components of the mammalian cardiac conduction system: Keith and Flack, Aschoff and Tawara, His, and Purkinje. American Journal of Physiology - Advances in Physiology Education, 2022, 46, 549-579.	0.8	5
38	Output optimization of biodegradable triboelectric nanogenerators. Nano Energy, 2022, 103, 107811.	8.2	24

#	ARTICLE	IF	CITATIONS
39	Flexible and highly piezoelectric nanofibers with organic-inorganic coaxial structure for self-powered physiological multimodal sensing. <i>Chemical Engineering Journal</i> , 2023, 451, 139077.	6.6	28
40	High performance dual-electrolyte magnesium-iodine batteries that can harmlessly resorb in the environment or in the body. <i>Energy and Environmental Science</i> , 2022, 15, 4095-4108.	15.6	14
41	Fluidic enabled bioelectronic implants: opportunities and challenges. <i>Journal of Materials Chemistry B</i> , 2022, 10, 7122-7131.	2.9	3
42	Ultra-Thin Flexible Encapsulating Materials for Soft Bio-Integrated Electronics. <i>Advanced Science</i> , 2022, 9, .	5.6	37
44	Mucosa-interfacing electronics. <i>Nature Reviews Materials</i> , 2022, 7, 908-925.	23.3	35
45	Ultrathin Fiber-Mesh Polymer Thermistors. <i>Advanced Science</i> , 2022, 9, .	5.6	9
47	In situ diagnosis and simultaneous treatment of cardiac diseases using a single-device platform. <i>Science Advances</i> , 2022, 8, .	4.7	13
48	Flexible Electro-Optical Arrays for Simultaneous Multi-Site Colocalized Spatiotemporal Cardiac Mapping and Modulation. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	7
49	Biodegradable polymeric materials for flexible and degradable electronics. <i>Frontiers in Electronics</i> , 0, 3, .	2.0	10
50	Stretchable Heterogeneous Polymer Networks of High Adhesion and Low Hysteresis. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 49264-49273.	4.0	4
51	A bioresorbable peripheral nerve stimulator for electronic pain block. <i>Science Advances</i> , 2022, 8, .	4.7	28
52	Transfer printing technologies for soft electronics. <i>Nanoscale</i> , 2022, 14, 16749-16760.	2.8	9
53	Passive and Flexible Wireless Electronics Fabricated on Parylene/PDMS Substrate for Stimulation of Human Stem Cell-Derived Cardiomyocytes. <i>ACS Sensors</i> , 2022, 7, 3287-3297.	4.0	1
54	High-speed, scanned laser structuring of multi-layered eco/bioresorbable materials for advanced electronic systems. <i>Nature Communications</i> , 2022, 13, .	5.8	14
55	Wireless, fully implantable cardiac stimulation and recording with on-device computation for closed-loop pacing and defibrillation. <i>Science Advances</i> , 2022, 8, .	4.7	16
56	Soft, wireless electronic dressing system for wound analysis and biophysical therapy. <i>Nano Today</i> , 2022, 47, 101685.	6.2	9
57	Smart electronics based on 2D materials for wireless healthcare monitoring. <i>Applied Physics Reviews</i> , 2022, 9, .	5.5	7
58	Biomechanical Sensing Systems for Cardiac Activity Monitoring. <i>International Journal of Biomaterials</i> , 2022, 2022, 1-14.	1.1	0

#	ARTICLE	IF	CITATIONS
59	Photolithographyâ€Based Microfabrication of Biodegradable Flexible and Stretchable Sensors. Advanced Materials, 2023, 35, .	11.1	11
60	Open thoracic surgical implantation of cardiac pacemakers in rats. Nature Protocols, 0, , .	5.5	0
61	Analysis of Equivalent Skin Model with Battery-Less Cardiac Pacemaker using Improved MPPT Controller. , 2022, , .		0
62	Biodegradable, three-dimensional colorimetric fliers for environmental monitoring. Science Advances, 2022, 8, .	4.7	12
63	Heart Energy Harvesting and Cardiac Bioelectronics: Technologies and Perspectives. Nanoenergy Advances, 2022, 2, 344-385.	3.6	4
64	Electrochemical biomaterials for self-powered implantable â€tissue batteriesâ€. A tutorial review. Nano Research, 2023, 16, 5447-5463.	5.8	2
65	Microstructured Electroceutical Fiberâ€Device for Inhibition of Bacterial Proliferation in Wounds. Advanced Materials Interfaces, 0, , 2201854.	1.9	2
66	Venationâ€Mimicking, Ultrastretchable, Roomâ€Temperatureâ€Attachable Metal Tapes for Integrated Electronic Skins. Advanced Materials, 2023, 35, .	11.1	9
67	Implantable and biodegradable closedâ€loop devices for autonomous electrotherapy. SmartMat, 2023, 4, .	6.4	2
68	Emerging Bioâ€interfacing Wearable Devices for Signal Monitoring: Overview of the Mechanisms and Diverse Sensor Designs to Target Distinct Physiological Bioâ€Parameters. , 2023, 2, .		5
69	Pathway of transient electronics towards connected biomedical applications. Nanoscale, 2023, 15, 4236-4249.	2.8	6
70	Triboelectric Nanogenerators for Implantable Medical Science. , 2023, , 1-30.		0
71	Bioinspired MXeneâ€Based Piezoresistive Sensor with Twoâ€stage Enhancement for Motion Capture. Advanced Functional Materials, 2023, 33, .	7.8	34
72	Biodegradable Implantable Microsystems. , 2022, , .		0
73	A Transient, Closed-Loop Network of Wireless, Body-Integrated Devices for Autonomous Electrotherapy. , 2022, , .		0
74	NFCapsule. , 2022, , .		2
75	Bioabsorbable WE43 Mg alloy wires modified by continuous plasma electrolytic oxidation for implant applications. Part II: Degradation and biological performance. , 2023, 147, 213325.		11
76	Circulatory Support: Artificial Muscles for the Future of Cardiovascular Assist Devices. Advanced Materials, 0, , .	11.1	2

#	ARTICLE	IF	CITATIONS
77	Recent Advances in Nanomaterials Used for Wearable Electronics. <i>Micromachines</i> , 2023, 14, 603.	1.4	5
78	Recent Advances in Cardiovascular Disease Biosensors and Monitoring Technologies. <i>ACS Sensors</i> , 2023, 8, 956-973.	4.0	17
79	Technology Roadmap for Flexible Sensors. <i>ACS Nano</i> , 2023, 17, 5211-5295.	7.3	238
80	Fully Biodegradable and Long-Term Operational Primary Zinc Batteries as Power Sources for Electronic Medicine. <i>ACS Nano</i> , 2023, 17, 5727-5739.	7.3	14
81	Some Recent Progress in Bioelectronics. , 2023, , .		0
82	Strategies for Safe Implantation and Effective Performance of Single-Chamber and Dual-Chamber Leadless Pacemakers. <i>Journal of Clinical Medicine</i> , 2023, 12, 2454.	1.0	0
83	Medical Hardware for Stimulation and Metrology of the Heart: Electrocardiogram and Pacemaker. , 2023, , .		0
84	Electronic tissue technologies for seamless biointerfaces. <i>Journal of Polymer Science</i> , 2023, 61, 1707-1712.	2.0	1
85	Ultra-stretchable and biodegradable elastomers for soft, transient electronics. <i>Nature Communications</i> , 2023, 14, .	5.8	20
86	Electrical stimulation for therapeutic approach. , 2023, 1, .		10
87	Recent Progress on Transparent Microelectrode-Based Soft Bioelectronic Devices for Neuroscience and Cardiac Research. <i>ACS Applied Bio Materials</i> , 2023, 6, 1701-1719.	2.3	1
88	Body shaping membrane to regenerate breast fat by elastic structural holding. <i>Research</i> , 2023, 6, .	2.8	2
93	Biodegradable materials and devices for neuroelectronics. <i>MRS Bulletin</i> , 0, , .	1.7	1
116	Soft bioelectronics for the management of cardiovascular diseases. , 2024, 2, 8-24.		4
119	A snapshot review on materials enabled multimodal bioelectronics for neurological and cardiac research. <i>MRS Advances</i> , 0, , .	0.5	0
127	Triboelectric Nanogenerators for Implantable Medical Science. , 2023, , 597-626.		1
128	StimRec: A Wireless, Battery-free Stimulator and Recorder Fabricated on a Flexible Substrate. , 2023, , .		0
137	Advances in Wireless, Batteryless, Implantable Electronics for Real-Time, Continuous Physiological Monitoring. <i>Nano-Micro Letters</i> , 2024, 16, .	14.4	0

#	ARTICLE	IF	CITATIONS
147	Processing techniques for bioresorbable-based composites for medical device applications. , 2024, , 41-62.		0
151	Organic encapsulants for bioresorbable medical electronics. MRS Bulletin, 2024, 49, 247-255.	1.7	0