

Philipp Gutruf

List of Publications by Citations

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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.

64

papers

4,613

citations

35

h-index

67

g-index

70

ext. papers

5,887

ext. citations

13.9

avg, IF

5.66

L-index

#	Paper	IF	Citations
64	Wearable sensors: modalities, challenges, and prospects. <i>Lab on A Chip</i> , 2018 , 18, 217-248	7.2	504
63	Bio-Integrated Wearable Systems: A Comprehensive Review. <i>Chemical Reviews</i> , 2019 , 119, 5461-5533	68.1	496
62	Skin-integrated wireless haptic interfaces for virtual and augmented reality. <i>Nature</i> , 2019 , 575, 473-479	50.4	307
61	Battery-free, skin-interfaced microfluidic/electronic systems for simultaneous electrochemical, colorimetric, and volumetric analysis of sweat. <i>Science Advances</i> , 2019 , 5, eaav3294	14.3	299
60	Flexible metasurfaces and metamaterials: A review of materials and fabrication processes at micro- and nano-scales. <i>Applied Physics Reviews</i> , 2015 , 2, 011303	17.3	204
59	Mechanically Tunable Dielectric Resonator Metasurfaces at Visible Frequencies. <i>ACS Nano</i> , 2016 , 10, 133-41	16.7	198
58	Epidermal electronics with advanced capabilities in near-field communication. <i>Small</i> , 2015 , 11, 906-12	11	191
57	Miniaturized Battery-Free Wireless Systems for Wearable Pulse Oximetry. <i>Advanced Functional Materials</i> , 2017 , 27, 1604373	15.6	182
56	Mechanical assembly of complex, 3D mesostructures from releasable multilayers of advanced materials. <i>Science Advances</i> , 2016 , 2, e1601014	14.3	152
55	Fully Biodegradable Microsupercapacitor for Power Storage in Transient Electronics. <i>Advanced Energy Materials</i> , 2017 , 7, 1700157	21.8	145
54	Waterproof, electronics-enabled, epidermal microfluidic devices for sweat collection, biomarker analysis, and thermography in aquatic settings. <i>Science Advances</i> , 2019 , 5, eaau6356	14.3	142
53	Miniaturized Flexible Electronic Systems with Wireless Power and Near-Field Communication Capabilities. <i>Advanced Functional Materials</i> , 2015 , 25, 4761-4767	15.6	114
52	Wireless optoelectronic photometers for monitoring neuronal dynamics in the deep brain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E1374-E1383	11.5	113
51	Materials and Device Designs for an Epidermal UV Colorimetric Dosimeter with Near Field Communication Capabilities. <i>Advanced Functional Materials</i> , 2017 , 27, 1604465	15.6	108
50	Fully implantable optoelectronic systems for battery-free, multimodal operation in neuroscience research. <i>Nature Electronics</i> , 2018 , 1, 652-660	28.4	92
49	Terahertz reflectarray as a polarizing beam splitter. <i>Optics Express</i> , 2014 , 22, 16148-60	3.3	83
48	Battery-free, fully implantable optofluidic cuff system for wireless optogenetic and pharmacological neuromodulation of peripheral nerves. <i>Science Advances</i> , 2019 , 5, eaaw5296	14.3	79

47	Wireless, battery-free, fully implantable multimodal and multisite pacemakers for applications in small animal models. <i>Nature Communications</i> , 2019 , 10, 5742	17.4	72
46	Implantable, wireless device platforms for neuroscience research. <i>Current Opinion in Neurobiology</i> , 2018 , 50, 42-49	7.6	71
45	Dielectric Resonator Reflectarray as High-Efficiency Nonuniform Terahertz Metasurface. <i>ACS Photonics</i> , 2016 , 3, 1019-1026	6.3	67
44	Wireless, battery-free optoelectronic systems as subdermal implants for local tissue oximetry. <i>Science Advances</i> , 2019 , 5, eaaw0873	14.3	65
43	Battery-free, lightweight, injectable microsystem for in vivo wireless pharmacology and optogenetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 21427-21437	11.5	61
42	Donor-Induced Performance Tuning of Amorphous SrTiO ₃ Memristive Nanodevices: Multistate Resistive Switching and Mechanical Tunability. <i>Advanced Functional Materials</i> , 2015 , 25, 3172-3182	15.6	59
41	Wireless, battery-free, flexible, miniaturized dosimeters monitor exposure to solar radiation and to light for phototherapy. <i>Science Translational Medicine</i> , 2018 , 10,	17.5	59
40	Transparent functional oxide stretchable electronics: micro-tectonics enabled high strain electrodes. <i>NPG Asia Materials</i> , 2013 , 5, e62-e62	10.3	58
39	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> , 2020 , 117, 2835-2845	11.5	55
38	Wireless, Battery-Free Epidermal Electronics for Continuous, Quantitative, Multimodal Thermal Characterization of Skin. <i>Small</i> , 2018 , 14, e1803192	11	53
37	Epidermal electronics for noninvasive, wireless, quantitative assessment of ventricular shunt function in patients with hydrocephalus. <i>Science Translational Medicine</i> , 2018 , 10,	17.5	51
36	Terahertz Magnetic Mirror Realized with Dielectric Resonator Antennas. <i>Advanced Materials</i> , 2015 , 27, 7137-44	24	48
35	Sweat-activated biocompatible batteries for epidermal electronic and microfluidic systems. <i>Nature Electronics</i> , 2020 , 3, 554-562	28.4	48
34	Metal-Air Transistors: Semiconductor-Free Field-Emission Air-Channel Nanoelectronics. <i>Nano Letters</i> , 2018 , 18, 7478-7484	11.5	48
33	Stretchable and Tunable Microtectonic ZnO-Based Sensors and Photonics. <i>Small</i> , 2015 , 11, 4532-9	11	47
32	Soft, Skin-Interfaced Microfluidic Systems with Passive Galvanic Stopwatches for Precise Chronometric Sampling of Sweat. <i>Advanced Materials</i> , 2019 , 31, e1902109	24	42
31	Strain Engineering of Wave-like Nanofibers for Dynamically Switchable Adhesive/Repulsive Surfaces. <i>Advanced Functional Materials</i> , 2016 , 26, 399-407	15.6	39
30	Strain response of stretchable micro-electrodes: Controlling sensitivity with serpentine designs and encapsulation. <i>Applied Physics Letters</i> , 2014 , 104, 021908	3.4	37

29	Nanoscale TiO ₂ dielectric resonator absorbers. <i>Optics Letters</i> , 2016 , 41, 3391-4	3	34
28	Wireless and battery-free technologies for neuroengineering. <i>Nature Biomedical Engineering</i> , 2021 ,	19	26
27	Wireless and battery-free platforms for collection of biosignals. <i>Biosensors and Bioelectronics</i> , 2021 , 178, 113007	11.8	22
26	Mechanically Tunable High Refractive-Index Contrast TiO ₂ /PDMS Gratings. <i>Advanced Optical Materials</i> , 2015 , 3, 1565-1569	8.1	13
25	Visible-Blind UV Imaging with Oxygen-Deficient Zinc Oxide Flexible Devices. <i>Advanced Electronic Materials</i> , 2015 , 1, 1500264	6.4	13
24	Perspective: Implantable optical systems for neuroscience research in behaving animal models—Current approaches and future directions. <i>APL Photonics</i> , 2018 , 3, 120901	5.2	10
23	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> , 2020 , 20, 4391-4403	7.2	9
22	Wireless battery free fully implantable multimodal recording and neuromodulation tools for songbirds. <i>Nature Communications</i> , 2021 , 12, 1968	17.4	9
21	Stretchable Electronics: Epidermal Electronics with Advanced Capabilities in Near-Field Communication (Small 8/2015). <i>Small</i> , 2015 , 11, 905-905	11	8
20	Excitatory VTA to DH projections provide a valence signal to memory circuits. <i>Nature Communications</i> , 2020 , 11, 1466	17.4	8
19	Activation of the dorsal, but not the ventral, hippocampus relieves neuropathic pain in rodents. <i>Pain</i> , 2021 , 162, 2865-2880	8	7
18	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> , 2021 , 118,	11.5	7
17	Epidermal Electronics: Wireless, Battery-Free Epidermal Electronics for Continuous, Quantitative, Multimodal Thermal Characterization of Skin (Small 47/2018). <i>Small</i> , 2018 , 14, 1870226	11	7
16	Flexible bi-layer terahertz chiral metamaterials. <i>Journal of Optics (United Kingdom)</i> , 2015 , 17, 085101	1.7	6
15	Osseosurface electronics—thin, wireless, battery-free and multimodal musculoskeletal biointerfaces. <i>Nature Communications</i> , 2021 , 12, 6707	17.4	6
14	Wireless, battery-free, and fully implantable electrical neurostimulation in freely moving rodents. <i>Microsystems and Nanoengineering</i> , 2021 , 7, 62	7.7	6
13	Terahertz and optical Dielectric Resonator Antennas: Potential and challenges for efficient designs 2016 ,		5
12	Biosymbiotic, personalized, and digitally manufactured wireless devices for indefinite collection of high-fidelity biosignals. <i>Science Advances</i> , 2021 , 7, eabj3269	14.3	5

11	Wearable devices for continuous monitoring of biosignals: Challenges and opportunities.. <i>APL Bioengineering</i> , 2022 , 6, 021502	6.6	5
10	Soft, Wireless and subdermally implantable recording and neuromodulation tools. <i>Journal of Neural Engineering</i> , 2021 ,	5	4
9	Oximetry: Miniaturized Battery-Free Wireless Systems for Wearable Pulse Oximetry (Adv. Funct. Mater. 1/2017). <i>Advanced Functional Materials</i> , 2017 , 27,	15.6	3
8	Smartphone for monitoring basic vital signs: miniaturized, near-field communication based devices for chronic recording of health 2020 , 177-208		3
7	Nicotine Sensors for Wearable Battery-Free Monitoring of Vaping. <i>ACS Sensors</i> , 2021 ,	9.2	3
6	Epidermal Electronics: Miniaturized Flexible Electronic Systems with Wireless Power and Near-Field Communication Capabilities (Adv. Funct. Mater. 30/2015). <i>Advanced Functional Materials</i> , 2015 , 25, 4919-4919	15.6	2
5	Semiconductor-Free Field-Emission Nanoelectronics: Application in Air-Channel Transistors 2019 ,		1
4	Flexible Inorganic Light Emitting Diodes Enabled by New Materials and Designs, With Examples of Their Use in Neuroscience Research 2019 , 1-39		
3	ZnO: Stretchable and Tunable Microtectonic ZnO-Based Sensors and Photonics (Small 35/2015). <i>Small</i> , 2015 , 11, 4414-4414	11	
2	Moving from Pedagogy to Andragogy in Biomedical Engineering Design: Strategies for Lab-at-Home and Distance Learning.. <i>Biomedical Engineering Education</i> , 2021 , 1, 301-305		
1	Wireless, Accumulation Mode Dosimeters for Monitoring Pulsed and Non-Pulsed Germicidal Lamps. <i>IEEE Sensors Journal</i> , 2021 , 21, 18706-18714	4	