

# Seung-Kyun Kang

## 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.

65  
papers

4,807  
citations

34  
h-index

69  
g-index

70  
ext. papers

5,668  
ext. citations

14.7  
avg, IF

5.21  
L-index

#	Paper	IF	Citations
65	Bioresorbable silicon electronic sensors for the brain. <i>Nature</i> , <b>2016</b> , 530, 71-6	50.4	582
64	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
63	Dissolvable Metals for Transient Electronics. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 645-658	15.6	290
62	High-performance biodegradable/transient electronics on biodegradable polymers. <i>Advanced Materials</i> , <b>2014</b> , 26, 3905-11	24	283
61	High-resolution patterns of quantum dots formed by electrohydrodynamic jet printing for light-emitting diodes. <i>Nano Letters</i> , <b>2015</b> , 15, 969-73	11.5	278
60	Biodegradable elastomers and silicon nanomembranes/nanoribbons for stretchable, transient electronics, and biosensors. <i>Nano Letters</i> , <b>2015</b> , 15, 2801-8	11.5	226
59	Wireless bioresorbable electronic system enables sustained nonpharmacological neuroregenerative therapy. <i>Nature Medicine</i> , <b>2018</b> , 24, 1830-1836	50.5	190
58	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
57	Fully Biodegradable Microsupercapacitor for Power Storage in Transient Electronics. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1700157	21.8	145
56	Dissolution chemistry and biocompatibility of single-crystalline silicon nanomembranes and associated materials for transient electronics. <i>ACS Nano</i> , <b>2014</b> , 8, 5843-51	16.7	145
55	Triggered transience of metastable poly(phthalaldehyde) for transient electronics. <i>Advanced Materials</i> , <b>2014</b> , 26, 7637-42	24	139
54	25th anniversary article: materials for high-performance biodegradable semiconductor devices. <i>Advanced Materials</i> , <b>2014</b> , 26, 1992-2000	24	130
53	Thermally triggered degradation of transient electronic devices. <i>Advanced Materials</i> , <b>2015</b> , 27, 3783-8	24	122
52	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
51	Influence of surface-roughness on indentation size effect. <i>Acta Materialia</i> , <b>2007</b> , 55, 3555-3562	8.4	114
50	Dissolution chemistry and biocompatibility of silicon- and germanium-based semiconductors for transient electronics. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 9297-305	9.5	113
49	Advanced Materials and Devices for Bioresorbable Electronics. <i>Accounts of Chemical Research</i> , <b>2018</b> , 51, 988-998	24.3	109

48	Biodegradable materials for multilayer transient printed circuit boards. <i>Advanced Materials</i> , <b>2014</b> , 26, 7371-7	24	109
47	Relation between blood pressure and pulse wave velocity for human arteries. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 11144-11149	11.5	109
46	CVD-grown monolayer MoS in bioabsorbable electronics and biosensors. <i>Nature Communications</i> , <b>2018</b> , 9, 1690	17.4	108
45	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
44	Water-soluble thin film transistors and circuits based on amorphous indium-gallium-zinc oxide. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 8268-74	9.5	98
43	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
42	Materials for programmed, functional transformation in transient electronic systems. <i>Advanced Materials</i> , <b>2015</b> , 27, 47-52	24	66
41	Biological lipid membranes for on-demand, wireless drug delivery from thin, bioresorbable electronic implants. <i>NPG Asia Materials</i> , <b>2015</b> , 7,	10.3	61
40	Extended expanding cavity model for measurement of flow properties using instrumented spherical indentation. <i>International Journal of Plasticity</i> , <b>2013</b> , 49, 1-15	7.6	60
39	Metal microparticle Polymer composites as printable, bio/ecoresorbable conductive inks. <i>Materials Today</i> , <b>2018</b> , 21, 207-215	21.8	44
38	Evaluating plastic flow properties by characterizing indentation size effect using a sharp indenter. <i>Acta Materialia</i> , <b>2008</b> , 56, 3338-3343	8.4	41
37	Fully implantable and bioresorbable cardiac pacemakers without leads or batteries. <i>Nature Biotechnology</i> , <b>2021</b> , 39, 1228-1238	44.5	38
36	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
35	Conventional Vickers and true instrumented indentation hardness determined by instrumented indentation tests. <i>Journal of Materials Research</i> , <b>2010</b> , 25, 337-343	2.5	36
34	Flexible Transient Optical Waveguides and Surface-Wave Biosensors Constructed from Monocrystalline Silicon. <i>Advanced Materials</i> , <b>2018</b> , 30, e1801584	24	36
33	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
32	Materials and Wireless Microfluidic Systems for Electronics Capable of Chemical Dissolution on Demand. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 1338-1343	15.6	34
31	Biodegradable Polyanhydrides as Encapsulation Layers for Transient Electronics. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2000941	15.6	32

30	Wireless Microfluidic Systems for Programmed, Functional Transformation of Transient Electronic Devices. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 5100-5106	15.6	32
29	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
28	Porous Silicon Gradient Refractive Index Micro-Optics. <i>Nano Letters</i> , <b>2016</b> , 16, 7402-7407	11.5	21
27	The emergence of transient electronic devices. <i>MRS Bulletin</i> , <b>2020</b> , 45, 87-95	3.2	16
26	Effective indenter radius and frame compliance in instrumented indentation testing using a spherical indenter. <i>Journal of Materials Research</i> , <b>2009</b> , 24, 2965-2973	2.5	16
25	Contact morphology and constitutive equation in evaluating tensile properties of austenitic stainless steels through instrumented spherical indentation. <i>Journal of Materials Science</i> , <b>2013</b> , 48, 232-239	4.3	11
24	Evaluation of nonequibiaxial residual stress using Knoop indenter. <i>Journal of Materials Research</i> , <b>2012</b> , 27, 121-125	2.5	11
23	Physically transient electronic materials and devices. <i>Materials Science and Engineering Reports</i> , <b>2021</b> , 145, 100624	30.9	11
22	Evaluation of high-temperature Vickers hardness using instrumented indentation system. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2016</b> , 650, 15-19	5.3	10
21	The light triggered dissolution of gold wires using potassium ferrocyanide solutions enables cumulative illumination sensing. <i>Sensors and Actuators B: Chemical</i> , <b>2019</b> , 282, 52-59	8.5	10
20	Constitutive equations optimized for determining strengths of metallic alloys. <i>Mechanics of Materials</i> , <b>2014</b> , 73, 51-57	3.3	8
19	Characterization of elastic modulus and work of adhesion in elastomeric polymers using microinstrumented indentation technique. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2008</b> , 496, 494-500	5.3	8
18	Determining effective radius and frame compliance in spherical nanoindentation. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2012</b> , 538, 58-62	5.3	7
17	Principles for Controlling the Shape Recovery and Degradation Behavior of Biodegradable Shape-Memory Polymers in Biomedical Applications. <i>Micromachines</i> , <b>2021</b> , 12,	3.3	7
16	Effect of contact angle on contact morphology and Vickers hardness measurement in instrumented indentation testing. <i>International Journal of Mechanical Sciences</i> , <b>2014</b> , 85, 104-109	5.5	6
15	Transient Electronics: Dissolvable Metals for Transient Electronics (Adv. Funct. Mater. 5/2014). <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 644-644	15.6	3
14	Correlation between the plastic strain and the plastic pileup of the instrumented indentation by utilizing the interrupted tensile test. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2012</b> , 535, 197-201	5.3	3
13	Biodegradable Molybdenum/Polybutylene Adipate Terephthalate Conductive Paste for Flexible and Stretchable Transient Electronics. <i>Advanced Materials Technologies</i> , 2001297	6.8	3

12	Biodegradable Metallic Glass for Stretchable Transient Electronics. <i>Advanced Science</i> , <b>2021</b> , 8, 2004029	13.6	3
11	Transient Electronics: Materials for Programmed, Functional Transformation in Transient Electronic Systems (Adv. Mater. 1/2015). <i>Advanced Materials</i> , <b>2015</b> , 27, 187-187	24	2
10	Integration of Ultrathin Silicon and Metal Nanowires for High-Performance Transparent Electronics. <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 1900962	6.8	1
9	Optical Waveguides: Flexible Transient Optical Waveguides and Surface-Wave Biosensors Constructed from Monocrystalline Silicon (Adv. Mater. 32/2018). <i>Advanced Materials</i> , <b>2018</b> , 30, 1870239	24	1
8	Electrochemical Fabrication of Flat, Polymer-Embedded Porous Silicon 1D Gradient Refractive Index Microlens Arrays. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2018</b> , 215, 1800088	1.6	1
7	Transparent Electronics: Integration of Ultrathin Silicon and Metal Nanowires for High-Performance Transparent Electronics (Adv. Mater. Technol. 4/2020). <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 2070021	6.8	1
6	Transient Electronics: Thermally Triggered Degradation of Transient Electronic Devices (Adv. Mater. 25/2015). <i>Advanced Materials</i> , <b>2015</b> , 27, 3782-3782	24	
5	Transient Electronics: Biodegradable Thin Metal Foils and Spin-On Glass Materials for Transient Electronics (Adv. Funct. Mater. 12/2015). <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 1904-1904	15.6	
4	Mechanical Characterization of Interfacial Adhesion in Elastomeric Material for Microelectronic Device through JKR Model Combined with Micro-to-Nano IIT. <i>Materials Research Society Symposia Proceedings</i> , <b>2009</b> , 1159, 6051		
3	Ultrathin Injectable Sensors: Ultrathin Injectable Sensors of Temperature, Thermal Conductivity, and Heat Capacity for Cardiac Ablation Monitoring (Adv. Healthcare Mater. 3/2016). <i>Advanced Healthcare Materials</i> , <b>2016</b> , 5, 394-394	10.1	
2	Ultrasensitive crack-based strain sensors: mechanism, performance, and biomedical applications. <i>Journal of Mechanical Science and Technology</i> , <b>2022</b> , 36, 1059-1077	1.6	
1	Biodegradable Organic Materials for Bioelectronics <b>2022</b> , 481-533		