

Sang-Gook Kim

List of Publications by Year in descending order

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86
papers

4,567
citations

257101

24
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110170

64
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89
all docs

89
docs citations

89
times ranked

5007
citing authors

#	ARTICLE	IF	CITATIONS
1	MEMS power generator with transverse mode thin film PZT. Sensors and Actuators A: Physical, 2005, 122, 16-22.	2.0	710
2	DESIGN CONSIDERATIONS FOR MEMS-SCALE PIEZOELECTRIC MECHANICAL VIBRATION ENERGY HARVESTERS. Integrated Ferroelectrics, 2005, 71, 121-160.	0.3	659
3	Extremely Elastic Wearable Carbon Nanotube Fiber Strain Sensor for Monitoring of Human Motion. ACS Nano, 2015, 9, 5929-5936.	7.3	634
4	A Review on Piezoelectric Energy Harvesting: Materials, Methods, and Circuits. Energy Harvesting and Systems, 2019, 4, 3-39.	1.7	288
5	Piezoelectric MEMS for energy harvesting. MRS Bulletin, 2012, 37, 1039-1050.	1.7	286
6	Ultra-wide bandwidth piezoelectric energy harvesting. Applied Physics Letters, 2011, 99, .	1.5	251
7	Enabling Ideal Selective Solar Absorption with 2D Metallic Dielectric Photonic Crystals. Advanced Materials, 2014, 26, 8041-8045.	11.1	120
8	Direct Insulation to Conduction Transformation of Adhesive Catecholamine for Simultaneous Increases of Electrical Conductivity and Mechanical Strength of CNT Fibers. Advanced Materials, 2015, 27, 3250-3255.	11.1	113
9	Performance prediction of weldline structure in amorphous polymers. Polymer Engineering and Science, 1986, 26, 1200-1207.	1.5	109
10	Fabrication and mechanical property of nano piezoelectric fibres. Nanotechnology, 2006, 17, 4497-4501.	1.3	98
11	Experiment and simulation validated analytical equivalent circuit model for piezoelectric micromachined ultrasonic transducers. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2015, 62, 744-765.	1.7	86
12	Strain-tunable silicon photonic band gap microcavities in optical waveguides. Applied Physics Letters, 2004, 84, 1242-1244.	1.5	79
13	Design of software systems based on axiomatic design. Robotics and Computer-Integrated Manufacturing, 1991, 8, 243-255.	6.1	63
14	Design of wide-angle selective absorbers/emitters with dielectric filled metallic photonic crystals for energy applications. Optics Express, 2014, 22, A144.	1.7	63
15	A strain amplifying piezoelectric MEMS actuator. Journal of Micromechanics and Microengineering, 2007, 17, 781-787.	1.5	58
16	Experimental verification of a bridge-shaped, nonlinear vibration energy harvester. Applied Physics Letters, 2014, 105, .	1.5	51
17	Optimizing the electrode size of circular bimorph plates with different boundary conditions for maximum deflection of piezoelectric micromachined ultrasonic transducers. Ultrasonics, 2013, 53, 328-334.	2.1	49
18	Analog tunable gratings driven by thin-film piezoelectric microelectromechanical actuators. Applied Optics, 2003, 42, 621.	2.1	44

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19	Theoretical modeling and equivalent electric circuit of a bimorph piezoelectric micromachined ultrasonic transducer. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 990-998.	1.7	43
20	Analog Piezoelectric-Driven Tunable Gratings With Nanometer Resolution. Journal of Microelectromechanical Systems, 2004, 13, 998-1005.	1.7	41
21	Analytic solution for N-electrode actuated piezoelectric disk with application to piezoelectric micromachined ultrasonic transducers. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 1756-1767.	1.7	41
22	Global optimization of omnidirectional wavelength selective emitters/absorbers based on dielectric-filled anti-reflection coated two-dimensional metallic photonic crystals. Optics Express, 2014, 22, 21711.	1.7	36
23	A high output voltage flexible piezoelectric nanogenerator using porous lead-free KNbO ₃ nanofibers. Applied Physics Letters, 2017, 111, .	1.5	34
24	An analytical analysis of the sensitivity of circular piezoelectric micromachined ultrasonic transducers to residual stress. , 2012, , .		33
25	Hafnia-plugged microcavities for thermal stability of selective emitters. Applied Physics Letters, 2013, 102, .	1.5	29
26	Large-strain, piezoelectric, in-plane micro-actuator. , 0, , .		26
27	Transplanting carbon nanotubes. Applied Physics Letters, 2004, 85, 5995-5997.	1.5	23
28	Buckled MEMS Beams for Energy Harvesting from Low Frequency Vibrations. Research, 2019, 2019, 1087946.	2.8	23
29	AI for design: Virtual design assistant. CIRP Annals - Manufacturing Technology, 2019, 68, 141-144.	1.7	21
30	An accurate equivalent circuit for the clamped circular multiple-electrode PMUT with residual stress. , 2013, , .		20
31	Improving patient flow through axiomatic design of hospital emergency departments. CIRP Journal of Manufacturing Science and Technology, 2010, 2, 255-260.	2.3	18
32	GoldFinger: Wireless human-machine interface with dedicated software and biomechanical energy harvesting system. IEEE/ASME Transactions on Mechatronics, 2015, , 1-1.	3.7	18
33	Surface plasmon assisted hot electron collection in wafer-scale metallic-semiconductor photonic crystals. Optics Express, 2016, 24, A1234.	1.7	18
34	Distributed Stochastic Control of MEMS-PZT Cellular Actuators with Broadcast Feedback. , 0, , .		16
35	Footstep energy harvesting using heel strike-induced airflow for human activity sensing. , 2016, , .		15
36	<title>High-brightness projection display systems based on the thin-film actuated mirror array (TFAMA)</title>. , 1998, , .		14

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37	Optimal Transmission Power in Self-sustainable Sensor Networks for Pipeline Monitoring. , 2007, , .		14
38	Iterative boundary pressure reflection method for the simulation of injection mold filling. Polymer Engineering and Science, 1990, 30, 1513-1522.	1.5	13
39	A nanoscanning platform for bio-engineering: an in-plane probe with switchable stiffness. Nanotechnology, 2006, 17, S69-S76.	1.3	13
40	An equivalent network representation of a clamped bimorph piezoelectric micromachined ultrasonic transducer with circular and annular electrodes using matrix manipulation techniques. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 1989-2003.	1.7	13
41	Electron beam induced rapid crystallization of water splitting nanostructures. MRS Advances, 2016, 1, 825-830.	0.5	13
42	Knowledge-based synthesis system for injection molding. Robotics and Computer-Integrated Manufacturing, 1987, 3, 181-186.	6.1	12
43	Self-Powered Wireless Sensor System using MEMS Piezoelectric Micro Power Generator. , 2006, , .		12
44	Design transcription: Deep learning based design feature representation. CIRP Annals - Manufacturing Technology, 2020, 69, 141-144.	1.7	12
45	Micromachined Thin-Film Mirror Array for Reflective Light Modulation. CIRP Annals - Manufacturing Technology, 1997, 46, 455-458.	1.7	11
46	Thin-Film Micromirror Array for High-Brightness Projection Displays. Japanese Journal of Applied Physics, 1998, 37, 7074-7077.	0.8	11
47	Transplanting assembly of carbon-nanotube-tipped atomic force microscope probes. Applied Physics Letters, 2009, 94, 193102.	1.5	11
48	Designing direct printing process for improved piezoelectric micro-devices. CIRP Annals - Manufacturing Technology, 2009, 58, 193-196.	1.7	11
49	MEMS tunable gratings with analog actuation. Information Sciences, 2003, 149, 31-40.	4.0	10
50	Working equations of a circular multimorph piezoelectric micromachined ultrasonic transducer. , 2012, , .		10
51	High-Damping Carbon Nanotube Hinged Micromirrors. Small, 2012, 8, 2006-2010.	5.2	10
52	Modeling and Experimental Validation of Bi-Stable Beam Based Piezoelectric Energy Harvester. Energy Harvesting and Systems, 2016, 3, 313-321.	1.7	10
53	Investigation of plasmon resonance in metal/dielectric nanocavities for high-efficiency photocatalytic device. Physical Chemistry Chemical Physics, 2017, 19, 16989-16999.	1.3	10
54	Effect of anisotropic electron momentum distribution of surface plasmon on internal photoemission of a Schottky hot carrier device. Optics Express, 2017, 25, A264.	1.7	10

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55	Energy Harvesting Combat Boot for Satellite Positioning. <i>Micromachines</i> , 2018, 9, 244.	1.4	10
56	Carbon nanotube-based magnetic actuation of origami membranes. <i>Journal of Vacuum Science & Technology B</i> , 2008, 26, 2509-2512.	1.3	9
57	Extracting functional requirements from design documentation using machine learning. <i>Procedia CIRP</i> , 2021, 100, 31-36.	1.0	9
58	Reading functional requirements using machine learning-based language processing. <i>CIRP Annals - Manufacturing Technology</i> , 2021, 70, 139-142.	1.7	9
59	A knowledge-based CAD system for concurrent product design in injection moulding. <i>International Journal of Computer Integrated Manufacturing</i> , 1991, 4, 209-218.	2.9	8
60	Thin-film micromirror array (TMA) for large information-display systems. <i>Journal of the Society for Information Display</i> , 2000, 8, 177.	0.8	8
61	Modeling of a Bridge-Shaped Nonlinear Piezoelectric Energy Harvester. <i>Energy Harvesting and Systems</i> , 2014, 1, .	1.7	8
62	Effect of ammonia gas etching on growth of vertically aligned carbon nanotubes/nanofibers. <i>Transactions of Nonferrous Metals Society of China</i> , 2011, 21, s130-s134.	1.7	7
63	Strain-tunable photonic bandgap microcavity waveguides in silicon at 1.55 μ m. , 2004, , .		6
64	Tunable stiffness scanning microscope probe. , 2004, , .		6
65	Rectifier-less piezoelectric micro power generator. , 2008, , .		6
66	Enhanced coupling of piezoelectric micromachined ultrasonic transducers with initial static deflection. , 2013, , .		6
67	Axiomatic Design: Making the Abstract Concrete. <i>Procedia CIRP</i> , 2016, 50, 216-221.	1.0	6
68	Measuring functional independence in design with deep-learning language representation models. <i>Procedia CIRP</i> , 2020, 91, 528-533.	1.0	6
69	Broadband photoelectric hot carrier collection with wafer-scale metallic-semiconductor photonic crystals. , 2015, , .		5
70	Automating Design Requirement Extraction From Text With Deep Learning. , 2021, , .		4
71	STRAIN-TUNING OF OPTICAL DEVICES WITH NANOMETER RESOLUTION. <i>CIRP Annals - Manufacturing Technology</i> , 2003, 52, 431-434.	1.7	3
72	Water-Immersion Micromachined Pb(Zr, Ti)O ₃ Thin Film Actuators. <i>Journal of Electroceramics</i> , 2004, 13, 509-513.	0.8	3

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73	Affordance-Based Surgical Design Methods Considering Biomechanical Artifacts. Ecological Psychology, 2021, 33, 57-71.	0.7	3
74	Omnidirectional wavelength selective emitters/absorbers based on dielectric-filled anti-reflection coated two-dimensional metallic photonic crystals. Proceedings of SPIE, 2014, , .	0.8	2
75	Optical diversity by nanoscale actuation. , 0, , .		1
76	Experimental verification of a bridge-shaped, non-linear vibration energy harvesters. , 2014, , .		1
77	MEMS Energy Harvesting from Low-frequency and Low-g Vibrations. Materials Research Society Symposia Proceedings, 2015, 1782, 9-14.	0.1	1
78	Axiomatic design of a man-machine interface for Alzheimer's patient care. IOP Conference Series: Materials Science and Engineering, 2021, 1174, 012007.	0.3	1
79	Artificial Intelligence Tools for Better Use of Axiomatic Design. IOP Conference Series: Materials Science and Engineering, 2021, 1174, 012005.	0.3	1
80	Design of Inverted Nano-Cone Arrayed SERS Substrate for Rapid Detection of Pathogens. Applied Sciences (Switzerland), 2021, 11, 8067.	1.3	1
81	Critical Process Issues in the Fabrication of a Lateral, Self-cleaning, MEMS Switch. Materials Research Society Symposia Proceedings, 2005, 872, 1.	0.1	0
82	Wide Bandwidth Piezoelectric MEMS Energy Harvesting. Materials Research Society Symposia Proceedings, 2013, 1556, 1.	0.1	0
83	Thermally Stable Two-Dimensional Photonic Crystal for Selective Emitters. Materials Research Society Symposia Proceedings, 2013, 1497, 1.	0.1	0
84	Low aspect ratio nanophotonic filled cavities with Q-matching for scalable thermophotovoltaic power conversion. , 2013, , .		0
85	Design Framework for Micro and Nano-Scale Products. , 2013, , 5-15.		0
86	Manufacturing Genome: A Foundation for Symbiotic, Highly Iterative Product and Production Adaptations. Lecture Notes in Mechanical Engineering, 2022, , 35-46.	0.3	0