

# Sang-Gook Kim

## List of Publications by Year in descending order

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Version: 2024-02-01

86

papers

4,567

citations

257450

24

h-index

110387

64

g-index

89

all docs

89

docs citations

89

times ranked

5007

citing authors

#	ARTICLE	IF	CITATIONS
1	Manufacturing Genome: A Foundation for Symbiotic, Highly Iterative Product and Production Adaptations. Lecture Notes in Mechanical Engineering, 2022, , 35-46.	0.4	0
2	Affordance-Based Surgical Design Methods Considering Biomechanical Artifacts. Ecological Psychology, 2021, 33, 57-71.	1.1	3
3	Extracting functional requirements from design documentation using machine learning. Procedia CIRP, 2021, 100, 31-36.	1.9	9
4	Reading functional requirements using machine learning-based language processing. CIRP Annals - Manufacturing Technology, 2021, 70, 139-142.	3.6	9
5	Axiomatic design of a man-machine interface for Alzheimer's patient care. IOP Conference Series: Materials Science and Engineering, 2021, 1174, 012007.	0.6	1
6	Artificial Intelligence Tools for Better Use of Axiomatic Design. IOP Conference Series: Materials Science and Engineering, 2021, 1174, 012005.	0.6	1
7	Design of Inverted Nano-Cone Arrayed SERS Substrate for Rapid Detection of Pathogens. Applied Sciences (Switzerland), 2021, 11, 8067.	2.5	1
8	Automating Design Requirement Extraction From Text With Deep Learning. , 2021, , .		4
9	Measuring functional independence in design with deep-learning language representation models. Procedia CIRP, 2020, 91, 528-533.	1.9	6
10	Design transcription: Deep learning based design feature representation. CIRP Annals - Manufacturing Technology, 2020, 69, 141-144.	3.6	12
11	AI for design: Virtual design assistant. CIRP Annals - Manufacturing Technology, 2019, 68, 141-144.	3.6	21
12	A Review on Piezoelectric Energy Harvesting: Materials, Methods, and Circuits. Energy Harvesting and Systems, 2019, 4, 3-39.	2.7	288
13	Buckled MEMS Beams for Energy Harvesting from Low Frequency Vibrations. Research, 2019, 2019, 1087946.	5.7	23
14	Energy Harvesting Combat Boot for Satellite Positioning. Micromachines, 2018, 9, 244.	2.9	10
15	Investigation of plasmon resonance in metal/dielectric nanocavities for high-efficiency photocatalytic device. Physical Chemistry Chemical Physics, 2017, 19, 16989-16999.	2.8	10
16	A high output voltage flexible piezoelectric nanogenerator using porous lead-free KNbO <sub>3</sub> nanofibers. Applied Physics Letters, 2017, 111, .	3.3	34
17	Effect of anisotropic electron momentum distribution of surface plasmon on internal photoemission of a Schottky hot carrier device. Optics Express, 2017, 25, A264.	3.4	10
18	Electron beam induced rapid crystallization of water splitting nanostructures. MRS Advances, 2016, 1, 825-830.	0.9	13

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19	Modeling and Experimental Validation of Bi-Stable Beam Based Piezoelectric Energy Harvester. Energy Harvesting and Systems, 2016, 3, 313-321.	2.7	10
20	Footstep energy harvesting using heel strike-induced airflow for human activity sensing. , 2016, , .		15
21	Axiomatic Design: Making the Abstract Concrete. Procedia CIRP, 2016, 50, 216-221.	1.9	6
22	Surface plasmon assisted hot electron collection in wafer-scale metallic-semiconductor photonic crystals. Optics Express, 2016, 24, A1234.	3.4	18
23	MEMS Energy Harvesting from Low-frequency and Low-g Vibrations. Materials Research Society Symposia Proceedings, 2015, 1782, 9-14.	0.1	1
24	Broadband photoelectric hot carrier collection with wafer-scale metallic-semiconductor photonic crystals. , 2015, , .		5
25	GoldFinger: Wireless human-machine interface with dedicated software and biomechanical energy harvesting system. IEEE/ASME Transactions on Mechatronics, 2015, , 1-1.	5.8	18
26	Extremely Elastic Wearable Carbon Nanotube Fiber Strain Sensor for Monitoring of Human Motion. ACS Nano, 2015, 9, 5929-5936.	14.6	634
27	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.	3.0	86
28	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.	21.0	113
29	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.	3.4	36
30	Experimental verification of a bridge-shaped, non-linear vibration energy harvesters. , 2014, , .		1
31	Omnidirectional wavelength selective emitters/absorbers based on dielectric-filled anti-reflection coated two-dimensional metallic photonic crystals. Proceedings of SPIE, 2014, , .	0.8	2
32	Design of wide-angle selective absorbers/emitters with dielectric filled metallic photonic crystals for energy applications. Optics Express, 2014, 22, A144.	3.4	63
33	Experimental verification of a bridge-shaped, nonlinear vibration energy harvester. Applied Physics Letters, 2014, 105, .	3.3	51
34	Enabling Ideal Selective Solar Absorption with 2D Metallic Dielectric Photonic Crystals. Advanced Materials, 2014, 26, 8041-8045.	21.0	120
35	Modeling of a Bridge-Shaped Nonlinear Piezoelectric Energy Harvester. Energy Harvesting and Systems, 2014, 1, .	2.7	8
36	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.	3.0	13

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37	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.	3.0	41
38	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.	3.9	49
39	Enhanced coupling of piezoelectric micromachined ultrasonic transducers with initial static deflection. , 2013, , .		6
40	Wide Bandwidth Piezoelectric MEMS Energy Harvesting. Materials Research Society Symposia Proceedings, 2013, 1556, 1.	0.1	0
41	Thermally Stable Two-Dimensional Photonic Crystal for Selective Emitters. Materials Research Society Symposia Proceedings, 2013, 1497, 1.	0.1	0
42	Hafnia-plugged microcavities for thermal stability of selective emitters. Applied Physics Letters, 2013, 102, .	3.3	29
43	Low aspect ratio nanophotonic filled cavities with Q-matching for scalable thermophotovoltaic power conversion. , 2013, , .		0
44	An accurate equivalent circuit for the clamped circular multiple-electrode PMUT with residual stress. , 2013, , .		20
45	Design Framework for Micro and Nano-Scale Products. , 2013, , 5-15.		0
46	Working equations of a circular multimorph piezoelectric micromachined ultrasonic transducer. , 2012, , .		10
47	An analytical analysis of the sensitivity of circular piezoelectric micromachined ultrasonic transducers to residual stress. , 2012, , .		33
48	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.	3.0	43
49	Piezoelectric MEMS for energy harvesting. MRS Bulletin, 2012, 37, 1039-1050.	3.5	286
50	High-Q Damping Carbon Nanotube Hinged Micromirrors. Small, 2012, 8, 2006-2010.	10.0	10
51	Ultra-wide bandwidth piezoelectric energy harvesting. Applied Physics Letters, 2011, 99, .	3.3	251
52	Effect of ammonia gas etching on growth of vertically aligned carbon nanotubes/nanofibers. Transactions of Nonferrous Metals Society of China, 2011, 21, s130-s134.	4.2	7
53	Improving patient flow through axiomatic design of hospital emergency departments. CIRP Journal of Manufacturing Science and Technology, 2010, 2, 255-260.	4.5	18
54	Transplanting assembly of carbon-nanotube-tipped atomic force microscope probes. Applied Physics Letters, 2009, 94, 193102.	3.3	11

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55	Designing direct printing process for improved piezoelectric micro-devices. CIRP Annals - Manufacturing Technology, 2009, 58, 193-196.	3.6	11
56	Rectifier-less piezoelectric micro power generator. , 2008, , .		6
57	Carbon nanotube-based magnetic actuation of origami membranes. Journal of Vacuum Science & Technology B, 2008, 26, 2509-2512.	1.3	9
58	Optimal Transmission Power in Self-sustainable Sensor Networks for Pipeline Monitoring. , 2007, , .		14
59	A strain amplifying piezoelectric MEMS actuator. Journal of Micromechanics and Microengineering, 2007, 17, 781-787.	2.6	58
60	Fabrication and mechanical property of nano piezoelectric fibres. Nanotechnology, 2006, 17, 4497-4501.	2.6	98
61	Self-Powered Wireless Sensor System using MEMS Piezoelectric Micro Power Generator. , 2006, , .		12
62	A nanos scanning platform for bio-engineering: an in-plane probe with switchable stiffness. Nanotechnology, 2006, 17, S69-S76.	2.6	13
63	MEMS power generator with transverse mode thin film PZT. Sensors and Actuators A: Physical, 2005, 122, 16-22.	4.1	710
64	Critical Process Issues in the Fabrication of a Lateral, Self-cleaning, MEMS Switch. Materials Research Society Symposia Proceedings, 2005, 872, 1.	0.1	0
65	DESIGN CONSIDERATIONS FOR MEMS-SCALE PIEZOELECTRIC MECHANICAL VIBRATION ENERGY HARVESTERS. Integrated Ferroelectrics, 2005, 71, 121-160.	0.7	659
66	Strain-tunable silicon photonic band gap microcavities in optical waveguides. Applied Physics Letters, 2004, 84, 1242-1244.	3.3	79
67	Transplanting carbon nanotubes. Applied Physics Letters, 2004, 85, 5995-5997.	3.3	23
68	Analog Piezoelectric-Driven Tunable Gratings With Nanometer Resolution. Journal of Microelectromechanical Systems, 2004, 13, 998-1005.	2.5	41
69	Water-Immersible Micromachined Pb(Zr, Ti)O <sub>3</sub> Thin Film Actuators. Journal of Electroceramics, 2004, 13, 509-513.	2.0	3
70	Strain-tunable photonic bandgap microcavity waveguides in silicon at 1.55 $\mu$ m. , 2004, , .		6
71	Tunable stiffness scanning microscope probe. , 2004, , .		6
72	STRAIN-TUNING OF OPTICAL DEVICES WITH NANOMETER RESOLUTION. CIRP Annals - Manufacturing Technology, 2003, 52, 431-434.	3.6	3

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73	MEMS tunable gratings with analog actuation. Information Sciences, 2003, 149, 31-40.	6.9	10
74	Analog tunable gratings driven by thin-film piezoelectric microelectromechanical actuators. Applied Optics, 2003, 42, 621.	2.1	44
75	Thin-film micromirror array (TMA) for large information-display systems. Journal of the Society for Information Display, 2000, 8, 177.	2.1	8
76	Thin-Film Micromirror Array for High-Brightness Projection Displays. Japanese Journal of Applied Physics, 1998, 37, 7074-7077.	1.5	11
77	<title>High-brightness projection display systems based on the thin-film actuated mirror array (TFAMA)</title>. , 1998, , .		14
78	Micromachined Thin-Film Mirror Array for Reflective Light Modulation. CIRP Annals - Manufacturing Technology, 1997, 46, 455-458.	3.6	11
79	A knowledge-based CAD system for concurrent product design in injection moulding. International Journal of Computer Integrated Manufacturing, 1991, 4, 209-218.	4.6	8
80	Design of software systems based on axiomatic design. Robotics and Computer-Integrated Manufacturing, 1991, 8, 243-255.	9.9	63
81	Iterative boundary pressure reflection method for the simulation of injection mold filling. Polymer Engineering and Science, 1990, 30, 1513-1522.	3.1	13
82	Knowledge-based synthesis system for injection molding. Robotics and Computer-Integrated Manufacturing, 1987, 3, 181-186.	9.9	12
83	Performance prediction of weldline structure in amorphous polymers. Polymer Engineering and Science, 1986, 26, 1200-1207.	3.1	109
84	Optical diversity by nanoscale actuation. , 0, , .		1
85	Large-strain, piezoelectric, in-plane micro-actuator. , 0, , .		26
86	Distributed Stochastic Control of MEMS-PZT Cellular Actuators with Broadcast Feedback. , 0, , .		16