

Tae Hyun Sung

List of Publications by Year in descending order

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Version: 2024-02-01

81
papers

1,510
citations

331670

21
h-index

361022

35
g-index

82
all docs

82
docs citations

82
times ranked

1164
citing authors

#	ARTICLE	IF	CITATIONS
1	Uniform stress distribution road piezoelectric generator with free-fixed-end type central strike mechanism. <i>Energy</i> , 2022, 239, 121812.	8.8	13
2	In situ TiC/Ti2Ni reinforced CrTi4-based composites during laser cladding. <i>Journal of Alloys and Compounds</i> , 2022, 892, 162086.	5.5	6
3	Enhanced surface composite coating on Ti811 alloy by laser cladding towards improved nano-hardness. <i>Ceramics International</i> , 2022, 48, 18773-18783.	4.8	11
4	Wearable Shoe-Mounted Piezoelectric Energy Harvester for a Self-Powered Wireless Communication System. <i>Energies</i> , 2022, 15, 237.	3.1	8
5	Wearable Piezoelectric Yarns with Inner Electrodes for Energy Harvesting and Signal Sensing. <i>Advanced Materials Technologies</i> , 2022, 7, .	5.8	5
6	A lever-type piezoelectric energy harvester with deformation-guiding mechanism for electric vehicle charging station on smart road. <i>Energy</i> , 2021, 218, 119540.	8.8	22
7	The effectiveness of different width piezoelectric energy harvester in the pedestrian floor tile energy harvesting system for internet of things sensors. <i>Journal of the Korean Physical Society</i> , 2021, 78, 81-88.	0.7	5
8	Carbon nanotube-reduced graphene oxide fiber with high torsional strength from rheological hierarchy control. <i>Nature Communications</i> , 2021, 12, 396.	12.8	29
9	A Flexible Piezoelectric Energy Harvester-Based Single-Layer WS2 Nanometer 2D Material for Self-Powered Sensors. <i>Energies</i> , 2021, 14, 2097.	3.1	11
10	Development of a hybrid type smart pen piezoelectric energy harvester for an IoT platform. <i>Energy</i> , 2021, 222, 119845.	8.8	19
11	An Assessment of the Optimal Capacity and an Economic Evaluation of a Sustainable Photovoltaic Energy System in Korea. <i>Sustainability</i> , 2021, 13, 12264.	3.2	2
12	Enhanced energy-generation performance of a landfilled road-capable piezoelectric harvester to scavenge energy from passing vehicles. <i>Energy Conversion and Management</i> , 2020, 215, 112900.	9.2	24
13	Optimization of the Energy Conversion Efficiency by Bending Deflection Piezoelectric Cantilever Beams. <i>Journal of the Korean Physical Society</i> , 2020, 76, 948-953.	0.7	0
14	Mobility of Air-Stable p-type Polythiophene Field-Effect Transistors Fabricated Using Oxidative Chemical Vapor Deposition. <i>Journal of Electronic Materials</i> , 2020, 49, 3465-3471.	2.2	4
15	Self-Powered Operational Amplifying System with a Bipolar Voltage Generator Using a Piezoelectric Energy Harvester. <i>Electronics (Switzerland)</i> , 2020, 9, 41.	3.1	5
16	Propeller-based Underwater Piezoelectric Energy Harvesting System for an Autonomous IoT Sensor System. <i>Journal of the Korean Physical Society</i> , 2020, 76, 251-256.	0.7	19
17	Graphene Foam Cantilever Produced via Simultaneous Foaming and Doping Effect of an Organic Coagulant. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 10763-10771.	8.0	9
18	Significant power enhancement method of magneto-piezoelectric energy harvester through directional optimization of magnetization for autonomous IoT platform. <i>Applied Energy</i> , 2019, 254, 113710.	10.1	16

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19	Development of a pavement block piezoelectric energy harvester for self-powered walkway applications. <i>Applied Energy</i> , 2019, 256, 113916.	10.1	42
20	Excellent carrier transport materials produced by controlled molecular stacking and their application in flexible organic electronic devices. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14790-14805.	10.3	10
21	Performance of a speed bump piezoelectric energy harvester for an automatic cellphone charging system. <i>Applied Energy</i> , 2019, 247, 221-227.	10.1	59
22	A multifunctional road-compatible piezoelectric energy harvester for autonomous driver-assist LED indicators with a self-monitoring system. <i>Applied Energy</i> , 2019, 242, 294-301.	10.1	56
23	Piezoelectric device operating as sensor and harvester to drive switching circuit in LED shoes. <i>Energy</i> , 2019, 177, 87-93.	8.8	47
24	Watts-level road-compatible piezoelectric energy harvester for a self-powered temperature monitoring system on an actual roadway. <i>Applied Energy</i> , 2019, 243, 313-320.	10.1	58
25	Synthesis and characterization of nanofiber-type hydrophobic organic materials as electrodes for improved performance of PVDF-based piezoelectric nanogenerators. <i>Nano Energy</i> , 2019, 58, 11-22.	16.0	28
26	Study on increasing output current of piezoelectric energy harvester by fabrication of multilayer thick film. <i>Sensors and Actuators A: Physical</i> , 2018, 269, 524-534.	4.1	29
27	Nonlinear Piezoelectric Energy Harvester with Ball Tip Mass. <i>Sensors and Actuators A: Physical</i> , 2018, 277, 124-133.	4.1	15
28	A High Efficient Piezoelectric Windmill using Magnetic Force for Low Wind Speed in Wireless Sensor Networks. <i>Journal of the Korean Physical Society</i> , 2018, 73, 1889-1894.	0.7	19
29	Optimized composite piezoelectric energy harvesting floor tile for smart home energy management. <i>Energy Conversion and Management</i> , 2018, 171, 31-37.	9.2	71
30	Design of optimized cantilever form of a piezoelectric energy harvesting system for a wireless remote switch. <i>Sensors and Actuators A: Physical</i> , 2018, 280, 340-349.	4.1	14
31	A Bending-Type Piezoelectric Energy Harvester with a Displacement-Amplifying Mechanism for Smart Highways. <i>Journal of the Korean Physical Society</i> , 2018, 73, 330-337.	0.7	21
32	Design of piezoelectric ocean-wave energy harvester using sway movement. <i>Sensors and Actuators A: Physical</i> , 2017, 260, 191-197.	4.1	65
33	Feasibility study of impact-based piezoelectric road energy harvester for wireless sensor networks in smart highways. <i>Sensors and Actuators A: Physical</i> , 2017, 261, 317-324.	4.1	48
34	Design of hydro electromagnetic and piezoelectric energy harvesters for a smart water meter system. <i>Sensors and Actuators A: Physical</i> , 2017, 261, 261-267.	4.1	21
35	Robust design optimization of fixed-fixed beam piezoelectric energy harvester considering manufacturing uncertainties. <i>Sensors and Actuators A: Physical</i> , 2017, 260, 236-246.	4.1	12
36	PVDF based flexible piezoelectric nanogenerators using conjugated polymer:PCBM blend systems. <i>Sensors and Actuators A: Physical</i> , 2017, 259, 112-120.	4.1	14

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37	A piezoelectric impact-induced vibration cantilever energy harvester from speed bump with a low-power power management circuit. <i>Sensors and Actuators A: Physical</i> , 2017, 254, 134-144.	4.1	74
38	Self-Start Piezoelectric Energy Harvesting Circuit With Adjustable UVLO Converter for Wireless Sensor Network. , 2017, , .		1
39	Sustainable micro-power circuit for piezoelectric energy harvesting tile. <i>Integrated Ferroelectrics</i> , 2017, 183, 193-209.	0.7	13
40	Development of impact-based piezoelectric road energy harvester for practical application. , 2016, , .		5
41	Designing a road energy harvester with multiple piezoelectric cantilever beams and a single tip mass. , 2016, , .		1
42	Designing a piezoelectric energy harvester using clicking mechanism. , 2016, , .		3
43	Non-resonant piezoelectric transformer based power converter for ultra-low-power electronic devices. <i>Sensors and Actuators A: Physical</i> , 2016, 244, 86-94.	4.1	2
44	Photon energy transfer by quantum dots in organic-inoorganic hybrid solar cells through FRET. <i>Journal of Materials Chemistry A</i> , 2016, 4, 10444-10453.	10.3	24
45	Road energy harvester designed as a macro-power source using the piezoelectric effect. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 12563-12568.	7.1	104
46	Hybrid-type (d33 and d31) impact-based piezoelectric hydroelectric energy harvester for watt-level electrical devices. <i>Sensors and Actuators A: Physical</i> , 2016, 245, 40-48.	4.1	12
47	Design of a multi-array piezoelectric energy harvester for a wireless switch. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 12696-12703.	7.1	11
48	Increasing Energy-harvesting ability of piezoelectric unimorph cantilevers using Spring Supports. <i>Journal of the Korean Physical Society</i> , 2016, 68, 1262-1266.	0.7	3
49	Piezoelectric energy harvesting system with magnetic pendulum movement for self-powered safety sensor of trains. <i>Sensors and Actuators A: Physical</i> , 2016, 250, 210-218.	4.1	51
50	Design Optimization of PZT-Based Piezoelectric Cantilever Beam by Using Computational Experiments. <i>Journal of Electronic Materials</i> , 2016, 45, 3848-3858.	2.2	13
51	Enhancing the dielectric property of 0.69PZT-0.31PZNN thick films by optimizing the poling condition. <i>Journal of the Korean Physical Society</i> , 2015, 66, 1549-1553.	0.7	2
52	Designing and manufacturing a piezoelectric tile for harvesting energy from footsteps. <i>Current Applied Physics</i> , 2015, 15, 669-674.	2.4	65
53	Design and optimization of piezoelectric impact-based micro wind energy harvester for wireless sensor network. <i>Sensors and Actuators A: Physical</i> , 2015, 222, 314-321.	4.1	78
54	Energy harvesting characteristics of unimorph cantilever generator using sintering conditions. <i>Journal of Electroceramics</i> , 2015, 34, 109-113.	2.0	4

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55	Study on improving current generating time of piezoelectric energy harvesting system. Journal of Electroceramics, 2015, 34, 207-215.	2.0	2
56	Establishment of the evaluation standard and the analysis technique for the tip mass method in piezoelectric energy - harvesting systems. Journal of the Korean Physical Society, 2014, 65, 1943-1950.	0.7	3
57	Design of an impact-type piezoelectric energy harvesting system for increasing power and durability of piezoelectric ceramics. Japanese Journal of Applied Physics, 2014, 53, 08NB03.	1.5	3
58	Optimization of a 0.69PZT-0.31PZNN thick film by controlling slurry viscosity and tape-casting blade height. Journal of the Korean Physical Society, 2014, 65, 2090-2094.	0.7	1
59	Increasing the Durability of Piezoelectric Impact-based Micro Wind Generator in Real Application. Procedia Engineering, 2014, 87, 1210-1213.	1.2	3
60	Effect of ball size and ball milling time on piezoelectric properties of 0.69PZT-0.31PZNN. , 2014, , .		0
61	Optimal design and application of a piezoelectric energy harvesting system using multiple piezoelectric modules. Journal of Electroceramics, 2014, 32, 396-403.	2.0	15
62	Effect of ball size and ball milling time on piezoelectric properties of 0.69PZT-0.31PZNN. , 2014, , .		0
63	Piezoelectric energy harvesting system for the vertical vibration of superconducting Maglev train. Journal of Electroceramics, 2013, 31, 35-41.	2.0	14
64	Designing a piezoelectric energy harvesting system for the superconductor Maglev. Journal of Electroceramics, 2013, 31, 1-7.	2.0	13
65	Design of a New Piezoelectric Energy Harvester Based on Secondary Impact. Ferroelectrics, 2013, 449, 83-93.	0.6	12
66	Study of Charging Efficiency of a Piezoelectric Energy Harvesting System Using Rectifier and Array Configuration. Ferroelectrics, 2013, 449, 42-51.	0.6	4
67	Design of Piezoelectric Energy Harvesting System by Magnetic Forceâ€“Controlled Resonance Frequency. Ferroelectrics, 2013, 449, 24-32.	0.6	5
68	Study on the Strain Effect of a Piezoelectric Energy Harvesting Module. Ferroelectrics, 2013, 449, 33-41.	0.6	15
69	Restoration and Reinforcement Method for Damaged Piezoelectric Materials. Ferroelectrics, 2013, 449, 52-61.	0.6	13
70	Effective Piezoelectric Area for Hitting-Type Piezoelectric Energy Harvesting System. Japanese Journal of Applied Physics, 2013, 52, 10MB03.	1.5	6
71	Stress Distribution Design of Additional Substrate for Piezoelectricity. Ferroelectrics, 2013, 449, 72-82.	0.6	4
72	Study on Application of Piezoelectricity to Korea Train eXpress (KTX). Ferroelectrics, 2013, 449, 11-23.	0.6	17

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73	Design of vibration exciter by using permanent magnets for application to piezoelectric energy harvesting. , 2012, , .		4
74	Rectifier and structural design for efficient energy harvesting system from impact-based piezoelectric array. , 2012, , .		0
75	Design of supplemental plate for piezoelectric system to distribute impact force. , 2012, , .		1
76	Study on reinforcement and repair of cracked piezoelectric materials. , 2012, , .		1
77	Feasibility study on application of piezoelectricity to convert vibrations of Korea Train eXpress. , 2012, , .		6
78	Strain control for optimization of piezoelectric energy harvesting. , 2012, , .		0
79	Low-temperature Sintering and Piezoelectric Properties of $0.65\text{Pb}(\text{Zr}_{1-x}\text{Ti}_x)\text{O}_3$ - $0.35\text{Pb}(\text{Ni}_{0.33}\text{Nb}_{0.67})\text{O}_3$ Ceramics. Journal of the American Ceramic Society, 2011, 94, 3442-3448.	0.67	15
80	Increase of Current Limiting Capacity of SFCLs by Using Matrix-Type SFCL Module. IEEE Transactions on Applied Superconductivity, 2011, 21, 1280-1283.	1.7	3
81	Solidification of $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$: Part I. Morphology. Journal of Materials Research, 1998, 13, 565-573.	2.6	4