Nguyen Van Toan

List of Publications by Year
in descending order

91 papers	800 citations	471509 17 h-index	610901 24 g-index
91 all docs	91 docs citations	91 times ranked	539 citing authors

#	Article	IF	Citations
1	Theoretical and experimental investigation of a thermoelectric generator (TEG) integrated with a phase change material (PCM) for harvesting energy from ambient temperature changes. Energy Reports, 2020, 6, 2022-2029.	5.1	51
2	Synthesis and Evaluation of Thick Films of Electrochemically Deposited Bi2Te3 and Sb2Te3 Thermoelectric Materials. Materials, 2017, 10, 154.	2.9	45
3	Fabrication ofÏ€-type flexible thermoelectric generators using an electrochemical deposition method for thermal energy harvesting applications at room temperature. Journal of Micromechanics and Microengineering, 2017, 27, 125006.	2.6	42
4	Thermoelectric generators for heat harvesting: From material synthesis to device fabrication. Energy Conversion and Management, 2020, 225, 113442.	9.2	32
5	Fabrication of an hermetically packaged silicon resonator on LTCC substrate. Microsystem Technologies, 2013, 19, 1165-1175.	2.0	30
6	Mechanical quality factor enhancement in a silicon micromechanical resonator by low-damage process using neutral beam etching technology. Journal of Micromechanics and Microengineering, 2014, 24, 085005.	2.6	28
7	An Investigation of Processes for Glass Micromachining. Micromachines, 2016, 7, 51.	2.9	26
8	Metal-assisted-chemical-etching of silicon nanowires for templating 3D graphene growth towards energy storage in microsystems. Journal of Micromechanics and Microengineering, 2019, 29, 055007.	2.6	25
9	Aluminum doped zinc oxide deposited by atomic layer deposition and its applications to micro/nano devices. Scientific Reports, 2021, 11, 1204.	3.3	25
10	Thermoelectric generator with a high integration density for portable and wearable self-powered electronic devices. Energy Conversion and Management, 2021, 245, 114571.	9.2	25
11	High Aspect Ratio Silicon Structures Produced via Metal-Assisted Chemical Etching and Assembly Technology for Cantilever Fabrication. IEEE Nanotechnology Magazine, 2017, 16, 567-573.	2.0	24
12	Thermoelectric power battery using al2o3 nanochannels of 10â€¯nm diameter for energy harvesting of low-grade waste heat. Energy Conversion and Management, 2019, 199, 111979.	9.2	24
13	A capacitive silicon resonator with a movable electrode structure for gap width reduction. Journal of Micromechanics and Microengineering, 2014, 24, 025006.	2.6	22
14	Impact of etch angles on cell characteristics in 3D NAND flash memory. Microelectronics Journal, 2018, 79, 1-6.	2.0	22
15	Heat storage thermoelectric generator as an electrical power source for wireless Iot sensing systems. International Journal of Energy Research, 2021, 45, 15557-15568.	4.5	21
16	Low Cost and Highâ€Aspect Ratio Micro/Nano Device Fabrication by Using Innovative Metalâ€Assisted Chemical Etching Method. Advanced Engineering Materials, 2019, 21, 1900490.	3.5	19
17	Ion transport by gating voltage to nanopores produced via metal-assisted chemical etching method. Nanotechnology, 2018, 29, 195301.	2.6	18
18	Liquid and solid states on-chip micro-supercapacitors using silicon nanowire-graphene nanowall-pani electrode based on microfabrication technology. Materials Research Bulletin, 2020, 131, 110977.	5.2	17

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19	Cantilever with High Aspect Ratio Nanopillars on Its Top Surface for Moisture Detection in Electronic Products. Advanced Engineering Materials, 2017, 19, 1700203.	3.5	14
20	A Long Bar Type Silicon Resonator with a High Quality Factor. IEEJ Transactions on Sensors and Micromachines, 2014, 134, 26-31.	0.1	14
21	Ultra-flexible thermoelectric generator based on silicone rubber sheet and electrodeposited thermoelectric material for waste heat harvesting. Energy Reports, 2022, 8, 5026-5037.	5.1	14
22	Fabrication of High Aspect Ratio SiO₂and Tempax Glass Pillar Structures and Its Application for Optical Modulator Device. Journal of Microelectromechanical Systems, 2016, 25, 668-674.	2.5	12
23	Liquid Thermocouple Using Thermoelectric Ionic Liquids. , 2019, 3, 1-4.		12
24	Micro-Fabricated Presure Sensor Using 50 nm-Thick of Pd-Based Metallic Glass Freestanding Membrane. Scientific Reports, 2020, 10, 10108.	3.3	12
25	Thermoelectrical properties of silicon substrates with nanopores synthesized by metal-assisted chemical etching. Nanotechnology, 2020, 31, 455705.	2.6	12
26	Morphological Analysis and Properties Evaluation of Electrodeposited Thick BiSbTe Films with Cooperative Interactions among Multiple Additives. Journal of the Electrochemical Society, 2021, 168, 022505.	2.9	12
27	Vertically-oriented graphene electrodeposited with MnO2 on native SiO2/Si for high-performance supercapacitor electrodes. Journal of Electroanalytical Chemistry, 2021, 895, 115507.	3.8	12
28	Fabrication of Vacuum-Sealed Capacitive Micromachined Ultrasonic Transducer Arrays Using Glass Reflow Process. Micromachines, 2016, 7, 76.	2.9	11
29	Fabrication and evaluation of capacitive silicon resonators with piezoresistive heat engines. Sensors and Actuators A: Physical, 2017, 262, 99-107.	4.1	11
30	(Invited) Nanoengineered Thermoelectric Energy Devices for IoT Sensing Applications. ECS Transactions, 2019, 92, 163-168.	0.5	10
31	Magnetostrictive Performance of Electrodeposited TbxDy(1â^'x)Fey Thin Film with Microcantilever Structures. Micromachines, 2020, 11, 523.	2.9	10
32	Single and mechanically coupled capacitive silicon nanomechanical resonators. Micro and Nano Letters, 2016, 11, 591-594.	1.3	9
33	Glass capillaries based on a glass reflow into nano-trench for controlling light transmission. Microsystem Technologies, 2016, 22, 2835-2840.	2.0	8
34	Progress in performance enhancement methods for capacitive silicon resonators. Japanese Journal of Applied Physics, 2017, 56, 110101.	1.5	8
35	Knudsen pump produced via silicon deep RIE, thermal oxidation, and anodic bonding processes for on-chip vacuum pumping. Journal of Micromechanics and Microengineering, 2018, 28, 055001.	2.6	8
36	Evaluation of Piezoresistive Property of Vanadium Oxide Thin Film Deposited by Sputtering. , 2018, 2, 1-4.		8

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37	Formation and Evaluation of Silicon Substrate with Highly-Doped Porous Si Layers Formed by Metal-Assisted Chemical Etching. Nanoscale Research Letters, 2021, 16, 64.	5.7	8
38	High-performance flexible thermoelectric generator for self-powered wireless BLE sensing systems. Journal of Power Sources, 2022, 536, 231504.	7.8	7
39	Fabrication of a SiO2 optical window for controlling light transmission. Microsystem Technologies, 2017, 23, 919-927.	2.0	6
40	Design and Fabrication of Capacitive Silicon Nanomechanical Resonators with Selective Vibration of a High-Order Mode. Micromachines, 2017, 8, 312.	2.9	6
41	Micropatterning and Integration of Electrospun PVDF Membrane Into Microdevice. Journal of Microelectromechanical Systems, 2020, 29, 438-445.	2.5	6
42	Capacitive silicon resonator structure with movable electrodes to reduce capacitive gap widths based on electrostatic parallel plate actuation. , 2014, , .		5
43	Glass reflow process for microsystem applications. Journal of Micromechanics and Microengineering, 2016, 26, 115018.	2.6	5
44	Micro-heat sink based on silicon nanowires formed by metal-assisted chemical etching for heat dissipation enhancement to improve performance of micro-thermoelectric generator. Energy Conversion and Management, 2022, 267, 115923.	9.2	5
45	Design and fabrication of a large area freestanding compressive stress SiO2optical window. Journal of Micromechanics and Microengineering, 2016, 26, 075016.	2.6	4
46	Temperature-dependence of the electrical impedance properties of sodium hydroxide-contained polyethylene oxide as an ionic liquid. Sensors and Actuators A: Physical, 2020, 316, 112369.	4.1	4
47	High Aspect Ratio SiO₂ Pillar Structures Capable of the Integration of an Image Sensor for Application of Optical Modulator. IEEJ Transactions on Sensors and Micromachines, 2016, 136, 41-42.	0.1	4
48	Self-powered wireless sensing system driven by daily ambient temperature energy harvesting. Applied Energy, 2022, 311, 118679.	10.1	4
49	Fabrication of nano-gap structures based on plastic deformation of strained Si springs by stiction effects. Microsystem Technologies, 2015, 21, 649-654.	2.0	3
50	Piezoresistive property of an aluminumâ€doped zinc oxide thin film deposited via atomicâ€layer deposition for microelectromechanical system/nanoelectromenchanical system applications. IEEJ Transactions on Electrical and Electronic Engineering, 2017, 12, S120.	1.4	3
51	Carbon Black Nanoparticles Inclusion in Bismuth Telluride Film for Micro Thermoelectric Generator Application. , 2020, , .		3
52	Heat Storage Thermoelectric Generator for Wireless IOT Sensing Systems. , 2021, , .		3
53	Vacuum Packaged Micro-Cantilever with a Magnetic Particle. IEEJ Transactions on Sensors and Micromachines, 2017, 137, 245-246.	0.1	3
54	Micro-Thermoelectric Generators: Material Synthesis, Device Fabrication, and Application Demonstration. , 0, , .		3

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55	Fabrication and packaging process of silicon resonators capable of the integration of LSI for application of timing device. , 2013, , .		2
56	Fabrication and evaluation of silicon micromechanical resonator using neutral beam etching technology. , 2014, , .		2
57	Electrostatically Driven Nanoelectromechanical Logical Gates Utilising Selective Tungsten Chemical Vapor Deposition. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800797.	1.8	2
58	Resonant magnetic sensor using concentration of magnetic field gradient by asymmetric permalloy plates. Microsystem Technologies, 2019, 25, 3983-3989.	2.0	2
59	Bridged resonator based on assembled Si thin wire. Journal of Micromechanics and Microengineering, 2020, 30, 105015.	2.6	2
60	Density effects of vertical graphene nanowalls on supercapacitor performance. Materials Advances, 2022, 3, 5406-5417.	5.4	2
61	Flexible thermoelectric power generator based on electrochemical deposition process. , 2016, , .		1
62	Flexible thermoelectric power generators based on electrochemical deposition process of BI<inf>2</inf>TE<inf>3</inf> and SB<inf>2</inf>TE<inf>3</inf>. , 2017, , .		1
63	Highâ€aspectâ€ratio aluminumâ€doped zinc oxide nanomechanical resonator. IEEJ Transactions on Electrical and Electronic Engineering, 2017, 12, S141.	1.4	1
64	Capacitive silicon resonators with piezoresistive heat engines. , 2017, , .		1
65	Glass Patterning: Technologies and Applications. , 0, , .		1
66	Electrolyte Based Thermal to Electric Energy Conversion Utilising 10 nm Diameter AL2O3 Nanochannels. , 2019, , .		1
67	Investigation of the Impact of External Stress on Memory Characteristics by Modifying the Backside of Substrate. IEEE Transactions on Electron Devices, 2019, 66, 1741-1746.	3.0	1
68	Fabrication of onâ€chip vacuum pump using a silicon nanostructure by metalâ€assisted chemical etching. IEEJ Transactions on Electrical and Electronic Engineering, 2019, 14, 954-958.	1.4	1
69	Logic gates based on electrically driven nanoelectromechanical switches. IEEJ Transactions on Electrical and Electronic Engineering, 2019, 14, 335-336.	1.4	1
70	Torsional resonator of Pdâ€“Siâ€“Cu metallic glass with a low rotational spring constant. Microsystem Technologies, 2021, 27, 929-935.	2.0	1
71	Mechanical Resonant Magnetic Sensor Utilizing Magnetically Induced Compressive Load from Magnetostrictive Material. IEEJ Transactions on Sensors and Micromachines, 2019, 139, 21-26.	0.1	1
72	High Performance Thermoelectric Films with Nanoengineered Electrochemical Process for Micro Thermoelectric Power Generators. ECS Meeting Abstracts, 2020, MA2020-01, 1204-1204.	0.0	1

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73	Nanoengineered nanochannels for thermally ionic nanofluidic energy harvesting. Energy Conversion and Management, 2022, 264, 115760.	9.2	1
74	Glass reflow process and its applications. , 2016, , .		0
75	Fabrication of high aspect aluminum doped zinc oxide nanomechanical structures by deep RIE and ALD. , 2017, , .		0
76	Reversible low voltage electrowetting with SiO<inf>2</inf> capillary window for optical imaging. , 2017, , .		0
77	Knudsen pump based on silicon etching and thermal oxidation process for on-chip vacuum pumping. , 2017, , .		0
78	Evaluation of piezoresistive property of vanadium oxide thin film. , 2018, , .		0
79	Electrically driven ion transport in nanopores fabricated by metal assisted chemical etching method. , 2018, , .		0
80	Temperature Sensor Using Two Thermoelectric Liquid Electrolytes in Microfluidic Channels. , 2019, , .		0
81	Nanoelectromechanical Logical Gates Utilising Selective Tungsten Chemical Vapor Deposition. , 2019, , .		0
82	Metal-Assisted Chemical Etching Method Subjected to Micro/Nano Device Fabrication. , 2019, , .		0
83	Magnetostrictive Performance of Electrodeposited TBXDY(1-X)FEY Thin Filmevaluated from Microactuator. , 2019, , .		0
84	High Performance Micro-Thermoelectric Generator Based on Metal Doped Electrochemical Deposition. , 2020, , .		0
85	Evaluation of Microfluidic Channels With Thin Si Windows and Trapping Structures. Journal of Microelectromechanical Systems, 2021, 30, 560-568.	2.5	0
86	Microfabrication: Glass Reflow. , 2014, , 1-7.		0
87	Humidity sensor based on the mechanical response of a cantilever with nanostructures on the surface. The Proceedings of Conference of Tohoku Branch, 2017, 2017.52, 164.	0.0	0
88	Carbon-Based Nanomaterials for Elastocaloric Cooling. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2019, 2019.10, 20am2PN211.	0.0	0
89	Capacitive Silicon Resonator Structures. , 2019, , 9-20.		0
90	Density Effects of Vertical Graphene Nanowalls on Supercapacitor Performance. SSRN Electronic Journal, 0, , .	0.4	0

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91	High Density Micro-Thermoelectric Generator Based On Electrodeposition of Bi2Te3 and Sb2Te3. , 2022, , .		0