Hoang-Phuong Phan

List of Publications by Year in Descending Order

137 papers	2,514 citations	29 h-index	43 g-index
157 ext. papers	3,195 ext. citations	5.5 avg, IF	5.49 L-index

#	Paper	IF	Citations
137	Engineering Stress in Thin Films: An Innovative Pathway Toward 3D Micro and Nanosystems (Small 4/2022). *Small*, **2022**, 18, 2270019	11	
136	Enhanced Electrohydrodynamics for Electrospinning a Highly Sensitive Flexible Fiber-Based Piezoelectric Sensor. *ACS Applied Electronic Materials*, **2022**, 4, 1301-1310	4	4
135	Picomolar detection of carbohydrate-lectin interactions on piezoelectrically printed microcantilever array.. *Biosensors and Bioelectronics*, **2022**, 205, 114088	11.8	1
134	A Wearable, Bending-Insensitive Respiration Sensor Using Highly Oriented Carbon Nanotube Film. *IEEE Sensors Journal*, **2021**, 21, 7308-7315	4	5
133	Localized Surface Plasmon Enhanced Laser Reduction of Graphene Oxide for Wearable Strain Sensor. *Advanced Materials Technologies*, **2021**, 6, 2001191	6.8	5
132	Wide-Band-Gap Semiconductors for Biointegrated Electronics: Recent Advances and Future Directions. *ACS Applied Electronic Materials*, **2021**, 3, 1959-1981	4	4
131	Electrospray propelled by ionic wind in a bipolar system for direct delivery of charge reduced nanoparticles. *Applied Physics Express*, **2021**, 14, 055001	2.4	1
130	Piezotronic effect in a normally off p-GaN/AlGaN/GaN HEMT toward highly sensitive pressure sensor. *Applied Physics Letters*, **2021**, 118, 242104	3.4	3
129	Digital Imaging-based Colourimetry for Enzymatic Processes in Transparent Liquid Marbles. *ChemPhysChem*, **2021**, 22, 99-105	3.2	7
128	Wet oxidation of 3C-SiC on Si for MEMS processing and use in harsh environments: Effects of the film thicknesses, crystalline orientations, and growth temperatures. *Sensors and Actuators A: Physical*, **2021**, 317, 112474	3.9	1
127	Ultra-sensitive self-powered position-sensitive detector based on horizontally-aligned double 3C-SiC/Si heterostructures. *Nano Energy*, **2021**, 79, 105494	17.1	10
126	Universal Electrochemical Synthesis of Mesoporous Chalcogenide Semiconductors: Mesoporous CdSe and CdTe Thin Films for Optoelectronic Applications. *Angewandte Chemie - International Edition*, **2021**, 60, 9660-9665	16.4	6
125	Toward on-board microchip synthesis of CdSe vs. PbSe nanocrystalline quantum dots as a spectral decoy for protecting space assets. *Reaction Chemistry and Engineering*, **2021**, 6, 471-485	4.9	2
124	Universal Electrochemical Synthesis of Mesoporous Chalcogenide Semiconductors: Mesoporous CdSe and CdTe Thin Films for Optoelectronic Applications. *Angewandte Chemie*, **2021**, 133, 9746-9751	3.6	0
123	Physical Sensors: Thermal Sensors **2021**,		0
122	Advances in ultrasensitive piezoresistive sensors: from conventional to flexible and stretchable applications. *Materials Horizons*, **2021**, 8, 2123-2150	14.4	9
121	In-air particle generation by on-chip electrohydrodynamics. *Lab on A Chip*, **2021**, 21, 1779-1787	7.2	1

120	Implanted Flexible Electronics: Set Device Lifetime with Smart Nanomaterials. *Micromachines*, **2021** , 12,	3.3	9
119	Piezoresistive Effect with a Gauge Factor of 18 000 in a Semiconductor Heterojunction Modulated by Bonded Light-Emitting Diodes. *ACS Applied Materials & Interfaces*, **2021**, 13, 35046-35053	9.5	3
118	Size-tuneable isolation of cancer cells using stretchable inertial microfluidics. *Lab on A Chip*, **2021**, 21, 2008-2018	7.2	7
117	Electrostatically excited liquid marble as a micromixer. *Reaction Chemistry and Engineering*, **2021**, 6, 1386-1394	4.3	4
116	Engineering Stress in Thin Films: An Innovative Pathway Toward 3D Micro and Nanosystems. *Small*, **2021**, e2105748	11	1
115	Optothermotronic effect as an ultrasensitive thermal sensing technology for solid-state electronics. *Science Advances*, **2020**, 6, eaay2671	14.3	9
114	Optoelectronic Enhancement for Piezoresistive Pressure Sensor **2020**,		2
113	Opto-electronic coupling in semiconductors: towards ultrasensitive pressure sensing. *Journal of Materials Chemistry C*, **2020**, 8, 4713-4721	7.1	12
112	Highly-doped SiC resonator with ultra-large tuning frequency range by Joule heating effect. *Materials and Design*, **2020**, 194, 108922	8.1	4
111	Self-powered monolithic accelerometer using a photonic gate. *Nano Energy*, **2020**, 76, 104950	17.1	11
110	Advances in Rational Design and Materials of High-Performance Stretchable Electromechanical Sensors. *Small*, **2020**, 16, e1905707	11	22
109	Lithography and Etching-Free Microfabrication of Silicon Carbide on Insulator Using Direct UV Laser Ablation . *Advanced Engineering Materials*, **2020**, 22, 1901173	3.5	4
108	High temperature silicon-carbide-based flexible electronics for monitoring hazardous environments. *Journal of Hazardous Materials*, **2020**, 394, 122486	12.8	12
107	ScAlN/3C-SiC/Si platform for monolithic integration of highly sensitive piezoelectric and piezoresistive devices. *Applied Physics Letters*, **2020**, 116, 132902	3.4	4
106	Nanoarchitectonics for Wide Bandgap Semiconductor Nanowires: Toward the Next Generation of Nanoelectromechanical Systems for Environmental Monitoring. *Advanced Science*, **2020**, 7, 2001294	13.6	27
105	A new structure of Tesla coupled nozzle in synthetic jet micro-pump. *Sensors and Actuators A: Physical*, **2020**, 315, 112296	3.9	7
104	Stretchable respiration sensors: Advanced designs and multifunctional platforms for wearable physiological monitoring. *Biosensors and Bioelectronics*, **2020**, 166, 112460	11.8	59
103	Liquid Marbles as Miniature Reactors for Chemical and Biological Applications. *Processes*, **2020**, 8, 793	2.9	31

102	Stretchable Inertial Microfluidic Device for Tunable Particle Separation. *Analytical Chemistry*, **2020**, 92, 12473-12480	7.8	11
101	Stretchable Bioelectronics: A Versatile Sacrificial Layer for Transfer Printing of Wide Bandgap Materials for Implantable and Stretchable Bioelectronics (Adv. Funct. Mater. 43/2020). *Advanced Functional Materials*, **2020**, 30, 2070287	15.6	0
100	Functional Microarray Platform with Self-Assembled Monolayers on 3C-Silicon Carbide. *Langmuir*, **2020**, 36, 13181-13192	4	2
99	A Versatile Sacrificial Layer for Transfer Printing of Wide Bandgap Materials for Implantable and Stretchable Bioelectronics. *Advanced Functional Materials*, **2020**, 30, 2004655	15.6	18
98	Mesoporous gold-silver alloy films towards amplification-free ultra-sensitive microRNA detection. *Journal of Materials Chemistry B*, **2020**, 8, 9512-9523	7.3	14
97	Paper-Based Electronics Using Graphite and Silver Nanoparticles for Respiration Monitoring. *IEEE Sensors Journal*, **2019**, 19, 11784-11790	4	18
96	Ultra-Sensitive OPTO-Piezoresistive Sensors Utilising 3C-SiC/Si Heterostructures **2019**,		2
95	Giant piezoresistive effect by optoelectronic coupling in a heterojunction. *Nature Communications*, **2019**, 10, 4139	17.4	28
94	Thermoresistance of p-Type 4H-SiC Integrated MEMS Devices for High-Temperature Sensing. *Advanced Engineering Materials*, **2019**, 21, 1801049	3.5	7
93	A hot-film air flow sensor for elevated temperatures. *Review of Scientific Instruments*, **2019**, 90, 015007	1.7	10
92	Transparent crystalline cubic SiC-on-glass electrodes enable simultaneous electrochemistry and optical microscopy. *Chemical Communications*, **2019**, 55, 7978-7981	5.8	2
91	Polyacrylonitrile-carbon Nanotube-polyacrylonitrile: A Versatile Robust Platform for Flexible Multifunctional Electronic Devices in Medical Applications. *Macromolecular Materials and Engineering*, **2019**, 304, 1900014	3.9	11
90	Self-Powered Broadband (UV-NIR) Photodetector Based on 3C-SiC/Si Heterojunction. *IEEE Transactions on Electron Devices*, **2019**, 66, 1804-1809	2.9	24
89	Avoiding Pre-Isolation Step in Exosome Analysis: Direct Isolation and Sensitive Detection of Exosomes Using Gold-Loaded Nanoporous Ferric Oxide Nanozymes. *Analytical Chemistry*, **2019**, 91, 3827-3834	7.8	137
88	Dependence of offset voltage in AlGaN/GaN van der Pauw devices under mechanical strain. *Materials Letters*, **2019**, 244, 66-69	3.3	2
87	Wireless Battery-Free SiC Sensors Operating in Harsh Environments Using Resonant Inductive Coupling. *IEEE Electron Device Letters*, **2019**, 40, 609-612	4.4	11
86	Long-Lived, Transferred Crystalline Silicon Carbide Nanomembranes for Implantable Flexible Electronics. *ACS Nano*, **2019**, 13, 11572-11581	16.7	65
85	Low-Cost Multifunctional Ionic Liquid Pressure and Temperature Sensor. *Smart Innovation, Systems and Technologies*, **2019**, 184-192	0.5	2

84	Carbon Nanotube Four-Terminal Devices for Pressure Sensing Applications. *Smart Innovation, Systems and Technologies*, **2019**, 199-207	0.5	1
83	Ultraviolet and Visible Photodetection Using 3C-SiC/Si Hetero-Epitaxial Junction. *Smart Innovation, Systems and Technologies*, **2019**, 208-216	0.5	1
82	Flexible Microfluidics: Fundamentals, Recent Developments, and Applications. *Micromachines*, **2019** , 10,	3.3	58
81	Electrical Resistance of Carbon Nanotube Yarns Under Compressive Transverse Pressure. *IEEE Electron Device Letters*, **2018**, 39, 584-587	4.4	12
80	Unintentionally Doped Epitaxial 3C-SiC(111) Nanothin Film as Material for Highly Sensitive Thermal Sensors at High Temperatures. *IEEE Electron Device Letters*, **2018**, 39, 580-583	4.4	17
79	Highly sensitive p-type 4H-SiC van der Pauw sensor.. *RSC Advances*, **2018**, 8, 3009-3013	3.7	15
78	Robust Free-Standing Nano-Thin SiC Membranes Enable Direct Photolithography for MEMS Sensing Applications. *Advanced Engineering Materials*, **2018**, 20, 1700858	3.5	18
77	A Generalized Analytical Model for Joule Heating of Segmented Wires. *Journal of Heat Transfer*, **2018**, 140,	1.8	6
76	A rapid and cost-effective metallization technique for 3C-SiC MEMS using direct wire bonding.. *RSC Advances*, **2018**, 8, 15310-15314	3.7	5
75	Naked-eye and electrochemical detection of isothermally amplified HOTAIR long non-coding RNA. *Analyst, The*, **2018**, 143, 3021-3028	5	22
74	Degraded boiling heat transfer from hotwire in ferrofluid due to particle deposition. *Applied Thermal Engineering*, **2018**, 142, 255-261	5.8	10
73	Photoresponse of a Highly-Rectifying 3C-SiC/Si Heterostructure Under UV and Visible Illuminations. *IEEE Electron Device Letters*, **2018**, 39, 1219-1222	4.4	10
72	High-temperature tolerance of the piezoresistive effect in p-4H-SiC for harsh environment sensing. *Journal of Materials Chemistry C*, **2018**, 6, 8613-8617	7.1	20
71	Isotropic piezoresistance of p-type 4H-SiC in (0001) plane. *Applied Physics Letters*, **2018**, 113, 012104	3.4	19
70	Highly sensitive 4H-SiC pressure sensor at cryogenic and elevated temperatures. *Materials and Design*, **2018**, 156, 441-445	8.1	39
69	Characterization of the piezoresistance in highly doped p-type 3C-SiC at cryogenic temperatures.. *RSC Advances*, **2018**, 8, 29976-29979	3.7	6
68	An On-Chip SiC MEMS Device with Integrated Heating, Sensing, and Microfluidic Cooling Systems. *Advanced Materials Interfaces*, **2018**, 5, 1800764	4.6	26
67	Utilizing large hall offset voltage for conversion free 4H-SiC strain sensor **2018**,		1

66	Highly sensitive 3C-SiC on glass based thermal flow sensor realized using MEMS technology. *Sensors and Actuators A: Physical*, **2018**, 279, 293-305	3.9	22
65	Highly sensitive pressure sensors employing 3C-SiC nanowires fabricated on a free standing structure. *Materials and Design*, **2018**, 156, 16-21	8.1	30
64	Silicon Micro-/Nanomachining and Applications **2018**, 225-261		1
63	Integrated photonic platform for quantum information with continuous variables. *Science Advances* , **2018**, 4, eaat9331	14.3	60
62	Strain Effect in Highly-Doped n-Type 3C-SiC-on-Glass Substrate for Mechanical Sensors and Mobility Enhancement. *Physica Status Solidi (A) Applications and Materials Science*, **2018**, 215, 1800288	1.6	4
61	Low-Cost Graphite on Paper Pressure Sensor for a Robot Gripper with a Trivial Fabrication Process. *Sensors*, **2018**, 18,	3.8	9
60	Environment-friendly wearable thermal flow sensors for noninvasive respiratory monitoring **2017**,		5
59	Active demultiplexing of single photons from a solid-state source. *Laser and Photonics Reviews*, **2017**, 11, 1600297	8.3	35
58	Piezoresistive Effect of p-Type Single Crystalline 3C-SiC. *Springer Theses*, **2017**,	0.1	4
57	Formation of silicon carbide nanowire on insulator through direct wet oxidation. *Materials Letters*, **2017**, 196, 280-283	3.3	3
56	Characterization of the Piezoresistive Effect in p-Type Single Crystalline 3C-SiC. *Springer Theses*, **2017**, 63-99	0.1	
55	Solvent-free fabrication of biodegradable hot-film flow sensor for noninvasive respiratory monitoring. *Journal Physics D: Applied Physics*, **2017**, 50, 215401	3	39
54	Experimental Investigation of Piezoresistive Effect in p-Type 4H□SiC. *IEEE Electron Device Letters*, **2017**, 38, 955-958	4.4	33
53	Introduction and Literature Review. *Springer Theses*, **2017**, 1-30	0.1	
52	Ultra-high strain in epitaxial silicon carbide nanostructures utilizing residual stress amplification. *Applied Physics Letters*, **2017**, 110, 141906	3.4	17
51	Steady-state analytical model of suspended p-type 3C□SiC bridges under consideration of Joule heating. *Journal of Micromechanics and Microengineering*, **2017**, 27, 075008	2	9
50	Piezo-Hall effect and fundamental piezo-Hall coefficients of single crystal n-type 3C-SiC(100) with low carrier concentration. *Applied Physics Letters*, **2017**, 110, 162903	3.4	3
49	. *Journal of Microelectromechanical Systems*, **2017**, 26, 966-986	2.5	78

48	Pseudo-Hall Effect in Single Crystal n-Type 3C-SiC(100) Thin Film. *Key Engineering Materials*, **2017**, 733, 3-7	0.4	3
47	Self-sensing paper-based actuators employing ferromagnetic nanoparticles and graphite. *Applied Physics Letters*, **2017**, 110, 144101	3.4	18
46	Single-Crystalline 3C-SiC anodically Bonded onto Glass: An Excellent Platform for High-Temperature Electronics and Bioapplications. *ACS Applied Materials & Interfaces*, **2017**, 9, 27365-27371	9.5	41
45	Superior Robust Ultrathin Single-Crystalline Silicon Carbide Membrane as a Versatile Platform for Biological Applications. *ACS Applied Materials & Interfaces*, **2017**, 9, 41641-41647	9.5	13
44	Pushing the Limits of Piezoresistive Effect by Optomechanical Coupling in 3C-SiC/Si Heterostructure. *ACS Applied Materials & Interfaces*, **2017**, 9, 39921-39925	9.5	22
43	Electrically Stable Carbon Nanotube Yarn Under Tensile Strain. *IEEE Electron Device Letters*, **2017**, 38, 1331-1334	4.4	13
42	Excellent Rectifying Properties of the n-3C-SiC/p-Si Heterojunction Subjected to High Temperature Annealing for Electronics, MEMS, and LED Applications. *Scientific Reports*, **2017**, 7, 17734	4.9	30
41	Fabrication of a sensitive pressure sensor using carbon nanotube micro-yarns **2017**,		1
40	Thermal Flow Sensors for Harsh Environments. *Sensors*, **2017**, 17,	3.8	40
39	The Piezoresistive Effect of Top Down p-Type 3C-SiC Nanowires. *Springer Theses*, **2017**, 109-117	0.1	2
38	Theory of the Piezoresistive Effect in p-Type 3C-SiC. *Springer Theses*, **2017**, 31-47	0.1	
37	The Piezoresistive Effect in p-Type Nanocrystalline SiC. *Springer Theses*, **2017**, 101-108	0.1	
36	3C-SiC Film Growth and Sample Preparation. *Springer Theses*, **2017**, 49-61	0.1	
35	Pseudo-Hall Effect in Graphite on Paper Based Four Terminal Devices for Stress Sensing Applications. *Journal of Physics: Conference Series*, **2017**, 829, 012004	0.3	0
34	Piezoresistive effect in p-type 3C-SiC at high temperatures characterized using Joule heating. *Scientific Reports*, **2016**, 6, 28499	4.9	47
33	The Piezoresistive Effect in Top□Down Fabricated p-Type 3C-SiC Nanowires. *IEEE Electron Device Letters*, **2016**, 37, 1029-1032	4.4	41
32	Piezo-Hall effect in single crystal p-type 3C□SiC(100) thin film grown by low pressure chemical vapor deposition. *RSC Advances*, **2016**, 6, 31191-31195	3.7	9
31	Piezoresistive effect of p-type single crystalline 3C□SiC on (111) plane. *RSC Advances*, **2016**, 6, 21302-21307	3.7	31

30	Influence of gallium ion beam acceleration voltage on the bend angle of amorphous silicon cantilevers. *Japanese Journal of Applied Physics*, **2016**, 55, 06GL02	1.4	6
29	Novel Low-Cost Sensor for Human Bite Force Measurement. *Sensors*, **2016**, 16,	3.8	13
28	Fundamental piezo-Hall coefficients of single crystal p-type 3C-SiC for arbitrary crystallographic orientation. *Applied Physics Letters*, **2016**, 109, 092903	3.4	3
27	Nano strain-amplifier: Making ultra-sensitive piezoresistance in nanowires possible without the need of quantum and surface charge effects. *Applied Physics Letters*, **2016**, 109, 123502	3.4	33
26	High thermosensitivity of silicon nanowires induced by amorphization. *Materials Letters*, **2016**, 177, 80-84	3.3	26
25	Environment-friendly carbon nanotube based flexible electronics for noninvasive and wearable healthcare. *Journal of Materials Chemistry C*, **2016**, 4, 10061-10068	7.1	90
24	3C-SiC on glass: an ideal platform for temperature sensors under visible light illumination. *RSC Advances*, **2016**, 6, 87124-87127	3.7	12
23	Flexible and multifunctional electronics fabricated by a solvent-free and user-friendly method. *RSC Advances*, **2016**, 6, 77267-77274	3.7	24
22	Influence of external mechanical stress on electrical properties of single-crystal n-3C-SiC/p-Si heterojunction diode. *Applied Physics Express*, **2015**, 8, 061302	2.4	9
21	Charge transport and activation energy of amorphous silicon carbide thin film on quartz at elevated temperature. *Applied Physics Express*, **2015**, 8, 061303	2.4	40
20	Graphite on paper as material for sensitive thermoresistive sensors. *Journal of Materials Chemistry C*, **2015**, 3, 8776-8779	7.1	80
19	Piezoresistive effect of p-type silicon nanowires fabricated by a top-down process using FIB implantation and wet etching. *RSC Advances*, **2015**, 5, 82121-82126	3.7	34
18	The Piezoresistive Effect of SiC for MEMS Sensors at High Temperatures: A Review. *Journal of Microelectromechanical Systems*, **2015**, 24, 1663-1677	2.5	150
17	The effect of device geometry and crystal orientation on the stress-dependent offset voltage of 3C-SiC(100) four terminal devices. *Journal of Materials Chemistry C*, **2015**, 3, 8804-8809	7.1	23
16	The Dependence of Offset Voltage in p-Type 3C-SiC van der Pauw Device on Applied Strain. *IEEE Electron Device Letters*, **2015**, 36, 708-710	4.4	23
15	Pseudo-Hall effect in single crystal 3C-SiC(111) four-terminal devices. *Journal of Materials Chemistry C*, **2015**, 3, 12394-12398	7.1	16
14	Graphite-on-paper based tactile sensors using plastic laminating technique **2015**,		8
13	Thermoresistive properties of p-type 3C-SiC nanoscale thin films for high-temperature MEMS thermal-based sensors. *RSC Advances*, **2015**, 5, 106083-106086	3.7	31

12	Orientation dependence of the pseudo-Hall effect in p-type 3C-SiC four-terminal devices under mechanical stress. *RSC Advances*, **2015**, 5, 56377-56381	3.7	24
11	The effect of strain on the electrical conductance of p-type nanocrystalline silicon carbide thin films. *Journal of Materials Chemistry C*, **2015**, 3, 1172-1176	7.1	27
10	Piezoresistive Effect of p-Type Single Crystalline 3C-SiC Thin Film. *IEEE Electron Device Letters*, **2014**, 35, 399-401	4.4	42
9	Multi-axis force sensor with dynamic range up to ultrasonic **2014**,		3
8	Thickness dependence of the piezoresistive effect in p-type single crystalline 3C-SiC nanothin films. *Journal of Materials Chemistry C*, **2014**, 2, 7176-7179	7.1	47
7	Electrical Properties of p-type 3C-SiC/Si Heterojunction Diode Under Mechanical Stress. *IEEE Electron Device Letters*, **2014**, 35, 1293-1295	4.4	27
6	Fundamental piezoresistive coefficients of p-type single crystalline 3C-SiC. *Applied Physics Letters*, **2014**, 104, 111905	3.4	59
5	A sensitive liquid-cantilever diaphragm for pressure sensor **2013**,		6
4	A hydrophone using liquid to bridge the gap of a piezo-resistive cantilever **2013**,		4
3	The production of recombinant human laminin-332 in a Leishmania tarentolae expression system. *Protein Expression and Purification*, **2009**, 68, 79-84	2	32
2	Expression and chain assembly of human laminin-332 in an insect cell-free translation system. *Bioscience, Biotechnology and Biochemistry*, **2008**, 72, 1847-52	2.1	5
1	Hydrogel Nanoarchitectonics: An Evolving Paradigm for Ultrasensitive Biosensing. *Small*,2107571	11	2