

# Muhammad Mustafa Hussain

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

231  
papers

4,193  
citations

35  
h-index

55  
g-index

298  
ext. papers

5,203  
ext. citations

6  
avg, IF

6.1  
L-index

| #   | Paper   | IF   | Citations |
|-----|---|------|-----------|
| 231 | The 2021 flexible and printed electronics roadmap. <i>Flexible and Printed Electronics</i> , <b>2022</b> , 6, 023001  | 3.1  | 33        |
| 230 | Toward nanotechnology-enabled face masks against SARS-CoV-2 and pandemic respiratory diseases. <i>Nanotechnology</i> , <b>2021</b> , 33,  | 3.4  | 3         |
| 229 | Recent Progress on Flexible Capacitive Pressure Sensors: From Design and Materials to Applications. <i>Advanced Materials Technologies</i> , <b>2021</b> , 6, 2001023   | 6.8  | 26        |
| 228 | Flexible Capacitive Pressure Sensors: Recent Progress on Flexible Capacitive Pressure Sensors: From Design and Materials to Applications (Adv. Mater. Technol. 4/2021). <i>Advanced Materials Technologies</i> , <b>2021</b> , 6, 2170023 | 6.8  | 1         |
| 227 | A Robust Wearable Point-of-Care CNT-Based Strain Sensor for Wirelessly Monitoring Throat-Related Illnesses. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2103375  | 15.6 | 22        |
| 226 | Mechanical reliability of self-similar serpentine interconnect for fracture-free stretchable electronic devices. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 014902  | 2.5  | 0         |
| 225 | Mechanically flexible viscosity sensor for real-time monitoring of tubular architectures for industrial applications. <i>Engineering Reports</i> , <b>2021</b> , 3, e12315  | 1.2  | 1         |
| 224 | Paper as a Substrate and an Active Material in Paper Electronics. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 30-52  | 4    | 14        |
| 223 | Design Criteria for Horseshoe and Spiral-Based Interconnects for Highly Stretchable Electronic Devices. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2007445  | 15.6 | 3         |
| 222 | Acceleration Sensors: Sensing Mechanisms, Emerging Fabrication Strategies, Materials, and Applications. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 504-531  | 4    | 7         |
| 221 | Stretchable Electronic Devices: Design Criteria for Horseshoe and Spiral-Based Interconnects for Highly Stretchable Electronic Devices (Adv. Funct. Mater. 7/2021). <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2170048      | 15.6 |           |
| 220 | Benchmarking Silicon FinFET With the Carbon Nanotube and 2D-FETs for Advanced Node CMOS Logic Application. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 3643-3648   | 2.9  | 1         |
| 219 | Stress concentration analysis and fabrication of silicon (100) based ultra-stretchable structures with parylene coating. <i>Extreme Mechanics Letters</i> , <b>2020</b> , 41, 101052  | 3.9  | 1         |
| 218 | Metal coated polymer and paper-based cantilever design and analysis for acoustic pressure sensing. <i>AIP Advances</i> , <b>2020</b> , 10, 055112   | 1.5  | 6         |
| 217 | Flexible Nanoporous Template for the Design and Development of Reusable Anti-COVID-19 Hydrophobic Face Masks. <i>ACS Nano</i> , <b>2020</b> , 14, 7659-7665   | 16.7 | 85        |
| 216 | Textile Electronics Prospects, Advances, Challenges and Opportunities. <i>MRS Advances</i> , <b>2020</b> , 5, 2359-2370.  | 0.7  | 0         |
| 215 | Nature-inspired spherical silicon solar cell for three-dimensional light harvesting, improved dust and thermal management. <i>MRS Communications</i> , <b>2020</b> , 10, 391-397  | 2.7  | 1         |

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|-----|---|------|----|
| 214 | Low-cost foil/paper based touch mode pressure sensing element as artificial skin module for prosthetic hand <b>2020</b> ,   |      | 3  |
| 213 | Enhanced Photoresponse of WS <sub>2</sub> Photodetectors through Interfacial Defect Engineering Using a TiO <sub>2</sub> Interlayer. <i>ACS Applied Electronic Materials</i> , <b>2020</b> , 2, 838-845   | 4    | 6  |
| 212 | Water Quality Monitoring: Heterogeneous Cubic Multidimensional Integrated Circuit for Water and Food Security in Fish Farming Ponds (Small 4/2020). <i>Small</i> , <b>2020</b> , 16, 2070023  | 11   |    |
| 211 | Diaphragm shape effect on the performance of foil-based capacitive pressure sensors. <i>AIP Advances</i> , <b>2020</b> , 10, 015009   | 1.5  | 11 |
| 210 | Mirror-symmetry controlled mechanical response of interconnects for stretchable electronics. <i>Extreme Mechanics Letters</i> , <b>2020</b> , 35, 100639  | 3.9  | 2  |
| 209 | Polymer/paper-based double touch mode capacitive pressure sensing element for wireless control of robotic arm <b>2020</b> ,   |      | 1  |
| 208 | Heterogeneous Cubic Multidimensional Integrated Circuit for Water and Food Security in Fish Farming Ponds. <i>Small</i> , <b>2020</b> , 16, e1905399  | 11   | 6  |
| 207 | Design Analysis and Human Tests of Foil-Based Wheezing Monitoring System for Asthma Detection. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 249-257   | 2.9  | 20 |
| 206 | Pressure-Driven Two-Input 3D Microfluidic Logic Gates. <i>Advanced Science</i> , <b>2020</b> , 7, 1903027   | 13.6 | 5  |
| 205 | Ultraflexible Corrugated Monocrystalline Silicon Solar Cells with High Efficiency (19%), Improved Thermal Performance, and Reliability Using Low-Cost Laser Patterning. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 2269-2275 | 9.5  | 12 |
| 204 | Personalized Healthcare: Expandable Polymer Assisted Wearable Personalized Medicinal Platform (Adv. Mater. Technol. 10/2020). <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 2070064   | 6.8  |    |
| 203 | Flexible High-Efficiency Corrugated Monocrystalline Silicon Solar Cells for Application in Small Unmanned Aerial Vehicles for Payload Transportation. <i>Energy Technology</i> , <b>2020</b> , 8, 2000670   | 3.5  | 2  |
| 202 | A Review of the Real-Time Monitoring of Fluid-Properties in Tubular Architectures for Industrial Applications. <i>Sensors</i> , <b>2020</b> , 20,   | 3.8  | 7  |
| 201 | Multisensory graphene-skin for harsh-environment applications. <i>Applied Physics Letters</i> , <b>2020</b> , 117, 074101   | 9.4  | 13 |
| 200 | Soft Actuators for Soft Robotic Applications: A Review. <i>Advanced Intelligent Systems</i> , <b>2020</b> , 2, 2070102  | 6    | 20 |
| 199 | Soft Actuators for Soft Robotic Applications: A Review. <i>Advanced Intelligent Systems</i> , <b>2020</b> , 2, 2000128  | 6    | 81 |
| 198 | Expandable Polymer Assisted Wearable Personalized Medicinal Platform. <i>Advanced Materials Technologies</i> , <b>2020</b> , 5, 2000411   | 6.8  | 4  |
| 197 | Flexible and stretchable inorganic solar cells: Progress, challenges, and opportunities. <i>MRS Energy &amp; Sustainability</i> , <b>2020</b> , 7, 1  | 2.2  | 3  |

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|-----|---|------|----|
| 196 | <b>2019,</b>  |      | 4  |
| 195 | Low-cost Foil based Wearable Sensory System for Respiratory Sound Analysis to Monitor Wheezing <b>2019,</b>   |      | 2  |
| 194 | Honeycomb-serpentine silicon platform for reconfigurable electronics. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 112105  | 3.4  | 6  |
| 193 | In-plane deformation mechanics of highly stretchable Archimedean interconnects. <i>AIP Advances</i> , <b>2019</b> , 9, 015224   | 1.5  | 2  |
| 192 | Noninvasive Featherlight Wearable Compliant "Marine Skin": Standalone Multisensory System for Deep-Sea Environmental Monitoring. <i>Small</i> , <b>2019</b> , 15, e1804385                            | 11   | 30 |
| 191 | An inclinometer using movable electrode in a parallel plate capacitive structure. <i>AIP Advances</i> , <b>2019</b> , 9, 045118   | 1.5  | 7  |
| 190 | Bi-Facial Substrates Enabled Heterogeneous Multi-Dimensional Integrated Circuits (MD-IC) for Internet of Things (IoT) Applications. <i>Advanced Engineering Materials</i> , <b>2019</b> , 21, 1900043 | 3.5  | 8  |
| 189 | Do-It-Yourself integration of a paper sensor in a smart lid for medication adherence. <i>Flexible and Printed Electronics</i> , <b>2019</b> , 4, 025001   | 3.1  | 6  |
| 188 | <b>2019,</b>  |      | 5  |
| 187 | Flexible and Stretchable Electronics for Harsh-Environmental Applications. <i>Advanced Materials Technologies</i> , <b>2019</b> , 4, 1900145  | 6.8  | 28 |
| 186 | Nano-scale transistors for interfacing with brain: design criteria, progress and prospect. <i>Nanotechnology</i> , <b>2019</b> , 30, 442001   | 3.4  | 4  |
| 185 | Flexible tag design for semi-continuous wireless data acquisition from marine animals. <i>Flexible and Printed Electronics</i> , <b>2019</b> , 4, 035006  | 3.1  | 2  |
| 184 | Corrugation Enabled Asymmetrically Ultrastretchable (95%) Monocrystalline Silicon Solar Cells with High Efficiency (19%). <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1902883                 | 21.8 | 19 |
| 183 | Flexible Electronics: Flexible and Stretchable Electronics for Harsh-Environmental Applications (Adv. Mater. Technol. 9/2019). <i>Advanced Materials Technologies</i> , <b>2019</b> , 4, 1970050      | 6.8  |    |
| 182 | Design, mechanics, and operation of spiral-interconnect based networked sensor for stretchable electronics. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 181904                                | 3.4  | 4  |
| 181 | Heterogeneous Multi-Dimensional Integrated Circuit for Internet-of-Things Application <b>2019,</b>  |      | 1  |
| 180 | High-Efficiency Corrugated Monocrystalline Silicon Solar Cells with Multi-Directional Flexing Capabilities <b>2019,</b>   |      | 1  |
| 179 | AI Powered Unmanned Aerial Vehicle for Payload Transport Application <b>2019,</b>   |      | 4  |

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| 178 | CMOS Enabled Microfluidic Systems for Healthcare Based Applications. <i>Advanced Materials</i> , <b>2018</b> , 30, e1705759  | 24   | 28 |
| 177 | Photonics: Enhanced Performance of MoS <sub>2</sub> Photodetectors by Inserting an ALD-Processed TiO <sub>2</sub> Interlayer (Small 5/2018). <i>Small</i> , <b>2018</b> , 14, 1870022                                | 11   | 2  |
| 176 | Thermoelectric Generators: Strain-Induced Rolled Thin Films for Lightweight Tubular Thermoelectric Generators (Adv. Mater. Technol. 1/2018). <i>Advanced Materials Technologies</i> , <b>2018</b> , 3, 1870002       | 6.8  | 10 |
| 175 | Corrugation Architecture Enabled Ultraflexible Wafer-Scale High-Efficiency Monocrystalline Silicon Solar Cell. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1702221   | 21.8 | 20 |
| 174 | Impact of Nickel Silicide Rear Metallization on the Series Resistance of Crystalline Silicon Solar Cells. <i>Energy Technology</i> , <b>2018</b> , 6, 1627-1632  | 3.5  | 3  |
| 173 | Flexible Displays: Wavy Architecture Thin-Film Transistor for Ultrahigh Resolution Flexible Displays (Small 1/2018). <i>Small</i> , <b>2018</b> , 14, 1870002  | 11   | 2  |
| 172 | Compliant lightweight non-invasive standalone Marine Skin Tagging system. <i>Npj Flexible Electronics</i> , <b>2018</b> , 2,   | 10.7 | 31 |
| 171 | Personalized Healthcare: CMOS Enabled Microfluidic Systems for Healthcare Based Applications (Adv. Mater. 16/2018). <i>Advanced Materials</i> , <b>2018</b> , 30, 1870111  | 24   | 3  |
| 170 | Solar Cells: Corrugation Architecture Enabled Ultraflexible Wafer-Scale High-Efficiency Monocrystalline Silicon Solar Cell (Adv. Energy Mater. 12/2018). <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1870055 | 21.8 | 10 |
| 169 | Flexible and Stretchable Wireless Systems <b>2018</b> , 229-252  |      | 1  |
| 168 | Modular Lego-Electronics. <i>Advanced Materials Technologies</i> , <b>2018</b> , 3, 1700147  | 6.8  | 6  |
| 167 | In-plane and out-of-plane structural response of spiral interconnects for highly stretchable electronics. <i>Journal of Applied Physics</i> , <b>2018</b> , 124, 034905  | 2.5  | 10 |
| 166 | High-Performance Flexible Magnetic Tunnel Junctions for Smart Miniaturized Instruments. <i>Advanced Engineering Materials</i> , <b>2018</b> , 20, 1800471  | 3.5  | 11 |
| 165 | In-Line Tunnel Field Effect Transistor: Drive Current Improvement. <i>IEEE Journal of the Electron Devices Society</i> , <b>2018</b> , 6, 721-725  | 2.3  | 5  |
| 164 | Ultra-stretchable Archimedean interconnects for stretchable electronics. <i>Extreme Mechanics Letters</i> , <b>2018</b> , 24, 6-13   | 3.9  | 8  |
| 163 | Strain-Induced Rolled Thin Films for Lightweight Tubular Thermoelectric Generators. <i>Advanced Materials Technologies</i> , <b>2018</b> , 3, 1700192  | 6.8  | 9  |
| 162 | Enhanced Performance of MoS Photodetectors by Inserting an ALD-Processed TiO Interlayer. <i>Small</i> , <b>2018</b> , 14, 1703176  | 11   | 39 |
| 161 | Wavy Architecture Thin-Film Transistor for Ultrahigh Resolution Flexible Displays. <i>Small</i> , <b>2018</b> , 14, 1703200  | 11   | 8  |

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|-----|---|------|----|
| 160 | Manufacturable Heterogeneous Integration for Flexible CMOS Electronics <b>2018</b> ,  |      | 1  |
| 159 | Do-It-Yourself (DIY) based Flexible Paper Sensor Based Electronic System for Pill Health Monitoring <b>2018</b> ,   |      | 3  |
| 158 | Stretchability of Archimedean-Spiral Interconnects Design <b>2018</b> ,   |      | 1  |
| 157 | The Future of CMOS: More Moore or a New Disruptive Technology? <b>2018</b> , 1-31   |      | 2  |
| 156 | 3D Printed Robotic Assembly Enabled Reconfigurable Display with Higher Resolution. <i>Advanced Materials Technologies</i> , <b>2018</b> , 3, 1800344  | 6.8  | 8  |
| 155 | Compliant plant wearables for localized microclimate and plant growth monitoring. <i>Npj Flexible Electronics</i> , <b>2018</b> , 2,  | 10.7 | 50 |
| 154 | Fully spherical stretchable silicon photodiodes array for simultaneous 360 imaging. <i>Applied Physics Letters</i> , <b>2018</b> , 113, 134101  | 3.4  | 5  |
| 153 | Solution processes for ultrabroadband and omnidirectional graded-index glass lenses with near-zero reflectivity in high concentration photovoltaics. <i>Scientific Reports</i> , <b>2018</b> , 8, 14907 | 4.9  | 3  |
| 152 | Nanowire Field-Effect Transistors <b>2018</b> , 33-54   |      | 1  |
| 151 | Flexible Lightweight CMOS-Enabled Multisensory Platform for Plant Microclimate Monitoring. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 1-7   | 2.9  | 8  |
| 150 | Flexible and Stretchable Electronics [Progress, Challenges, and Prospects. <i>Electrochemical Society Interface</i> , <b>2018</b> , 27, 65-69   | 3.6  | 11 |
| 149 | Contact resistance reduction of ZnO thin film transistors (TFTs) with saw-shaped electrode. <i>Nanotechnology</i> , <b>2018</b> , 29, 325202  | 3.4  | 3  |
| 148 | Freeform Compliant CMOS Electronic Systems for Internet of Everything Applications. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 1894-1905  | 2.9  | 12 |
| 147 | Review Micro and Nano-Engineering Enabled New Generation of Thermoelectric Generator Devices and Applications. <i>ECS Journal of Solid State Science and Technology</i> , <b>2017</b> , 6, N3036-N3044  | 2    | 46 |
| 146 | Highly Manufacturable Deep (Sub-Millimeter) Etching Enabled High Aspect Ratio Complex Geometry Lego-Like Silicon Electronics. <i>Small</i> , <b>2017</b> , 13, 1601801                                  | 11   | 8  |
| 145 | Impact of Physical Deformation on Electrical Performance of Paper-Based Sensors. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 2022-2029   | 2.9  | 12 |
| 144 | Recyclable Nonfunctionalized Paper-Based Ultralow-Cost Wearable Health Monitoring System. <i>Advanced Materials Technologies</i> , <b>2017</b> , 2, 1600228   | 6.8  | 47 |
| 143 | Water soluble nano-scale transient material germanium oxide for zero toxic waste based environmentally benign nano-manufacturing. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 074103            | 3.4  | 8  |

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|-----|---|------|----|
| 142 | Stretchable and foldable silicon-based electronics. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 134103  | 3.4  | 15 |
| 141 | Expandable Polymer Enabled Wirelessly Destructible High-Performance Solid State Electronics. <i>Advanced Materials Technologies</i> , <b>2017</b> , 2, 1600264                                      | 6.8  | 14 |
| 140 | Porous Nanomaterials for Ultrabroadband Omnidirectional Anti-Reflection Surfaces with Applications in High Concentration Photovoltaics. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1601992 | 21.8 | 19 |
| 139 | Flexible and biocompatible high-performance solid-state micro-battery for implantable orthodontic system. <i>Npj Flexible Electronics</i> , <b>2017</b> , 1,  | 10.7 | 45 |
| 138 | Stable MoS2 Field-Effect Transistors Using TiO2 Interfacial Layer at Metal/MoS2 Contact. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2017</b> , 214, 1700534           | 1.6  | 10 |
| 137 | Mechanical response of spiral interconnect arrays for highly stretchable electronics. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 214102  | 3.4  | 17 |
| 136 | Printed Organic and Inorganic Electronics: Devices To Systems. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , <b>2017</b> , 7, 147-160                               | 5.2  | 26 |
| 135 | Paper-based origami flexible and foldable thermoelectric nanogenerator. <i>Nano Energy</i> , <b>2017</b> , 31, 296-301  | 7.1  | 94 |
| 134 | Decal Electronics: Printable Packaged with 3D Printing High-Performance Flexible CMOS Electronic Systems. <i>Advanced Materials Technologies</i> , <b>2017</b> , 2, 1600175                         | 6.8  | 7  |
| 133 | FDM 3D printed coffee glove embedded with flexible electronic <b>2017</b> ,   |      | 3  |
| 132 | Affordable dual-sensing proximity sensor for touchless interactive systems <b>2016</b> ,  |      | 1  |
| 131 | Deterministic Integration of Out-of-Plane Sensor Arrays for Flexible Electronic Applications. <i>Small</i> , <b>2016</b> , 12, 5141-5145  | 11   | 14 |
| 130 | Stretchable helical architecture inorganic-organic hetero thermoelectric generator. <i>Nano Energy</i> , <b>2016</b> , 30, 691-699  | 17.1 | 42 |
| 129 | Artificial Skin: Paper Skin Multisensory Platform for Simultaneous Environmental Monitoring (Adv. Mater. Technol. 1/2016). <i>Advanced Materials Technologies</i> , <b>2016</b> , 1,                | 6.8  | 1  |
| 128 | Out-of-Plane Strain Effects on Physically Flexible FinFET CMOS. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 2657-2664  | 2.9  | 11 |
| 127 | Three-terminal nanoelectromechanical switch based on tungsten nitride--an amorphous metallic material. <i>Nanotechnology</i> , <b>2016</b> , 27, 035202   | 3.4  | 5  |
| 126 | Zinc Oxide Integrated Wavy Channel Thin-Film Transistor-Based High-Performance Digital Circuits. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 193-196                                    | 4.4  | 6  |
| 125 | Wavy Channel TFT-Based Digital Circuits. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 1550-1556   | 2.9  | 4  |

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|-----|---|------|-----|
| 124 | Free-Form Flexible Lithium-Ion Microbattery. <i>IEEE Nanotechnology Magazine</i> , <b>2016</b> , 15, 402-408  | 2.6  | 16  |
| 123 | CMOS-Technology-Enabled Flexible and Stretchable Electronics for Internet of Everything Applications. <i>Advanced Materials</i> , <b>2016</b> , 28, 4219-49   | 24   | 134 |
| 122 | Design criteria for XeF <sub>2</sub> enabled deterministic transformation of bulk silicon (100) into flexible silicon layer. <i>AIP Advances</i> , <b>2016</b> , 6, 075010  | 1.5  | 8   |
| 121 | Concentrator photovoltaic module architectures with capabilities for capture and conversion of full global solar radiation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, E8210-E8218 | 11.5 | 33  |
| 120 | High performance high- $\gamma$ metal gate complementary metal oxide semiconductor circuit element on flexible silicon. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 094102  | 3.4  | 15  |
| 119 | A CMOS-compatible large-scale monolithic integration of heterogeneous multi-sensors on flexible silicon for IoT applications <b>2016</b> ,  |      | 4   |
| 118 | From stretchable to reconfigurable inorganic electronics. <i>Extreme Mechanics Letters</i> , <b>2016</b> , 9, 245-268   | 3.9  | 38  |
| 117 | Flexible Electronics: Deterministic Integration of Out-of-Plane Sensor Arrays for Flexible Electronic Applications (Small 37/2016). <i>Small</i> , <b>2016</b> , 12, 5140-5140  | 11   |     |
| 116 | Paper Skin Multisensory Platform for Simultaneous Environmental Monitoring. <i>Advanced Materials Technologies</i> , <b>2016</b> , 1, 1600004   | 6.8  | 74  |
| 115 | Thin PZT-Based Ferroelectric Capacitors on Flexible Silicon for Nonvolatile Memory Applications. <i>Advanced Electronic Materials</i> , <b>2015</b> , 1, 1500045  | 6.4  | 80  |
| 114 | InAs/Si Hetero-Junction Nanotube Tunnel Transistors. <i>Scientific Reports</i> , <b>2015</b> , 5, 9843  | 4.9  | 58  |
| 113 | Nonplanar Nanoscale Fin Field Effect Transistors on Textile, Paper, Wood, Stone, and Vinyl via Soft Material-Enabled Double-Transfer Printing. <i>ACS Nano</i> , <b>2015</b> , 9, 5255-63   | 16.7 | 22  |
| 112 | Si/Ge hetero-structure nanotube tunnel field effect transistor. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 014215   | 4.5  | 44  |
| 111 | Wavy Channel architecture thin film transistor (TFT) using amorphous zinc oxide for high-performance and low-power semiconductor circuits <b>2015</b> ,   |      | 2   |
| 110 | Transformational electronics are now reconfiguring <b>2015</b> ,  |      | 5   |
| 109 | A thermoelectric generator using loop heat pipe and design match for maximum-power generation. <i>Applied Thermal Engineering</i> , <b>2015</b> , 91, 1082-1091   | 5.8  | 16  |
| 108 | Study of harsh environment operation of flexible ferroelectric memory integrated with PZT and silicon fabric. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 052904  | 3.4  | 38  |
| 107 | Ultrastretchable and flexible copper interconnect-based smart patch for adaptive thermotherapy. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 665-73  | 10.1 | 58  |



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|-----|---|------|-----|
| 106 | Simulation Study of a 3-D Device Integrating FinFET and UTBFET. <i>IEEE Transactions on Electron Devices</i> , <b>2015</b> , 62, 83-87  | 2.9  | 22  |
| 105 | Thermal Patches: Ultrastretchable and Flexible Copper Interconnect-Based Smart Patch for Adaptive Thermotherapy (Adv. Healthcare Mater. 5/2015). <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 664-664  | 10.1 | 1   |
| 104 | Design Considerations for Optimized Lateral Spring Structures for Wearable Electronics <b>2015</b> ,  |      | 2   |
| 103 | Enhanced cooling in mono-crystalline ultra-thin silicon by embedded micro-air channels. <i>AIP Advances</i> , <b>2015</b> , 5, 127115   | 1.5  | 9   |
| 102 | SiSn diodes: Theoretical analysis and experimental verification. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 082111   | 3.4  | 3   |
| 101 | Functional integrity of flexible n-channel metal oxide semiconductor field-effect transistors on a reversibly bistable platform. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 174101   | 3.4  | 15  |
| 100 | Out-of-plane strain effect on silicon-based flexible FinFETs <b>2015</b> ,  |      | 5   |
| 99  | Metal/Polymer Based Stretchable Antenna for Constant Frequency Far-Field Communication in Wearable Electronics. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 6565-6575  | 15.6 | 105 |
| 98  | (Invited) Wavy Channel TFT Architecture for High Performance Oxide Based Displays. <i>ECS Transactions</i> , <b>2015</b> , 67, 191-198  | 1    | 4   |
| 97  | The Role of Microfabrication and Nanotechnology in the Development of Microbial Fuel Cells. <i>Energy Technology</i> , <b>2015</b> , 3, 996-1006  | 3.5  | 4   |
| 96  | Review on Physically Flexible Nonvolatile Memory for Internet of Everything Electronics. <i>Electronics (Switzerland)</i> , <b>2015</b> , 4, 424-479  | 2.6  | 97  |
| 95  | Ultra-high density out-of-plane strain sensor 3D architecture based on sub-20 nm PMOS FinFET <b>2015</b> ,  |      | 3   |
| 94  | Electrical Analysis of High Dielectric Constant Insulator and Metal Gate Metal Oxide Semiconductor Capacitors on Flexible Bulk Mono-Crystalline Silicon. <i>IEEE Transactions on Reliability</i> , <b>2015</b> , 64, 579-585  | 4.6  | 14  |
| 93  | Flexible and transparent silicon-on-polymer based sub-20 nm non-planar 3D FinFET for brain-architecture inspired computation. <i>Advanced Materials</i> , <b>2014</b> , 26, 2794-9  | 24   | 43  |
| 92  | Energy harvesting from organic liquids in micro-sized microbial fuel cells. <i>NPG Asia Materials</i> , <b>2014</b> , 6, e89-e89  | 10.3 | 58  |
| 91  | Manufacturing of Thermoelectric Nanomaterials (Bi <sub>0.4</sub> Sb <sub>1.6</sub> Te <sub>3</sub> /Bi <sub>1.75</sub> Te <sub>3.25</sub> ) and Integration into Window Glasses for Thermoelectricity Generation. <i>Energy Technology</i> , <b>2014</b> , 2, 292-299 | 3.5  | 6   |
| 90  | Tin: An unlikely ally for silicon field effect transistors?. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2014</b> , 8, 332-335   | 2.5  | 8   |
| 89  | Area and Energy Efficient High-Performance ZnO Wavy Channel Thin-Film Transistor. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 3223-3228  | 2.9  | 6   |

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|----|---|------|----|
| 88 | Rapid Evaluation of Power Degradation in Series Connection of Single Feeding Microsized Microbial Fuel Cells. <i>Energy Technology</i> , <b>2014</b> , 2, 673-676   | 3.5  | 1  |
| 87 | Solid state MEMS devices on flexible and semi-transparent silicon (100) platform <b>2014</b> ,  |      | 3  |
| 86 | Flexible nanoscale high-performance FinFETs. <i>ACS Nano</i> , <b>2014</b> , 8, 9850-6  | 16.7 | 53 |
| 85 | Towards neuromorphic electronics: Memristors on foldable silicon fabric. <i>Microelectronics Journal</i> , <b>2014</b> , 45, 1392-1395  | 1.8  | 18 |
| 84 | Transformational silicon electronics. <i>ACS Nano</i> , <b>2014</b> , 8, 1468-74  | 16.7 | 70 |
| 83 | Additive advantage in characteristics of MIMCAPs on flexible silicon (100) fabric with release-first process. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2014</b> , 8, 163-166  | 2.5  | 13 |
| 82 | Transformational electronics: a powerful way to revolutionize our information world <b>2014</b> ,   |      | 1  |
| 81 | CMOS compatible fabrication of flexible and semi-transparent FeRAM on ultra-thin bulk monocrystalline silicon (100) fabric <b>2014</b> ,  |      | 3  |
| 80 | CMOS compatible route for GaAs based large scale flexible and transparent electronics <b>2014</b> ,   |      | 3  |
| 79 | Wavy channel thin film transistor architecture for area efficient, high performance and low power displays. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2014</b> , 8, 248-251  | 2.5  | 6  |
| 78 | Exploring SiSn as a performance enhancing semiconductor: A theoretical and experimental approach. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 224506   | 2.5  | 10 |
| 77 | High temperature study of flexible silicon-on-insulator fin field-effect transistors. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 133509  | 3.4  | 5  |
| 76 | CMOS compatible generic batch process towards flexible memory on bulk monocrystalline silicon (100) <b>2014</b> ,   |      | 1  |
| 75 | Design and characterization of ultra-stretchable monolithic silicon fabric. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 154101  | 3.4  | 42 |
| 74 | Mechanical anomaly impact on metal-oxide-semiconductor capacitors on flexible silicon fabric. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 234104  | 3.4  | 22 |
| 73 | Role of metal/silicon semiconductor contact engineering for enhanced output current in micro-sized microbial fuel cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2014</b> , 211, 551-554                               | 1.6  | 3  |
| 72 | Role of metal/silicon semiconductor contact engineering for enhanced output current in micro-sized microbial fuel cells (Phys. Status Solidi A 30014). <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2014</b> , 211, 550-550 | 1.6  |    |
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| 70 | Low-cost high-quality crystalline germanium based flexible devices. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2014</b> , 08, 794-800  | 2.5  | 9   |
| 69 | Atmospheric pressure chemical vapor deposition (APCVD) grown bi-layer graphene transistor characteristics at high temperature. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2014</b> , 8, 621-624  | 2.5  | 3   |
| 68 | Power generation from thermoelectric system-embedded Plexiglas for green building technology. <i>Applied Nanoscience (Switzerland)</i> , <b>2013</b> , 3, 335-342  | 3.3  | 0   |
| 67 | Thermoelectricity from wasted heat of integrated circuits. <i>Applied Nanoscience (Switzerland)</i> , <b>2013</b> , 3, 175-178   | 3.3  | 5   |
| 66 | Flexible and semi-transparent thermoelectric energy harvesters from low cost bulk silicon (100). <i>Small</i> , <b>2013</b> , 9, 3916-21, 3915   | 11   | 61  |
| 65 | Chemical vapor deposition based tungsten disulfide (WS <sub>2</sub> ) thin film transistor <b>2013</b> ,   |      | 5   |
| 64 | Memristor-based memory: The sneak paths problem and solutions. <i>Microelectronics Journal</i> , <b>2013</b> , 44, 176-183   | 1.8  | 251 |
| 63 | High-Performance Silicon Nanotube Tunneling FET for Ultralow-Power Logic Applications. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 1034-1039  | 2.9  | 69  |
| 62 | Wavy channel transistor for area efficient high performance operation. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 134109  | 3.4  | 16  |
| 61 | Sustainable design of high-performance micro-sized microbial fuel cell with carbon nanotube anode and air cathode. <i>ACS Nano</i> , <b>2013</b> , 7, 6921-7   | 16.7 | 65  |
| 60 | Can we build a truly high performance computer which is flexible and transparent?. <i>Scientific Reports</i> , <b>2013</b> , 3, 2609   | 4.9  | 55  |
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| 58 | Graphene-Based Flexible Micrometer-Sized Microbial Fuel Cell. <i>Energy Technology</i> , <b>2013</b> , 1, 648-652  | 3.5  | 13  |
| 57 | Low-voltage back-gated atmospheric pressure chemical vapor deposition based graphene-stripped channel transistor with high-κ dielectric showing room-temperature mobility > 11,000 cm <sup>2</sup> /V <sup>2</sup> s. <i>ACS Nano</i> , <b>2013</b> , 7, 5818-23 | 16.7 | 13  |
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| 55 | Post-CMOS FinFET Integration of Bismuth Telluride and Antimony Telluride Thin-Film-Based Thermoelectric Devices on Si Substrate. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 1334-1336   | 4.4  | 7   |
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| 53 | Exploring SiSn as channel material for LSTP device applications <b>2013</b> ,  |      | 3   |

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|----|---|------|-----|
| 52 | Tin (Sn) for enhancing performance in silicon CMOS <b>2013</b> ,  |      | 1   |
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| 50 | Energy Harvesters: Flexible and Semi-Transparent Thermoelectric Energy Harvesters from Low Cost Bulk Silicon (100) (Small 23/2013). <i>Small</i> , <b>2013</b> , 9, 3915-3915   |      | 11  |
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| 13 | Highly selective isotropic dry etch based nanofabrication. <i>Journal of Vacuum Science &amp; Technology B</i> , <b>2007</b> , 25, 1416  |     | 1  |
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| 2  | Integration of Dual Metal Gate CMOS on High-k Dielectrics Utilizing a Metal Wet Etch Process. <i>Electrochemical and Solid-State Letters</i> , <b>2005</b> , 8, G271   |     | 37 |
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