# Woong-Ki Hong

List of Publications by Year
in descending order

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| 84 | 3,476 | 147801 | 138484 |
|---|---|---|---|
| papers | citations | 31 h-index | 58 g-index |

| 85 | 85 | 85 | 6272 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Large-scale patterned multi-layer graphene films as transparent conducting electrodes for GaN light-emitting diodes. Nanotechnology, 2010, 21, 175201. | 2.6 | 259 |
| 2 | Tunable Electronic Transport Characteristics of Surface-Architecture-Controlled ZnO Nanowire Field Effect Transistors. Nano Letters, 2008, 8, 950-956. | 9.1 | 235 |
| 3 | Electric Stress-Induced Threshold Voltage Instability of Multilayer MoS<sub>2</sub> Field Effect Transistors. ACS Nano, 2013, 7, 7751-7758. | 14.6 | 190 |
| 4 | Highly Flexible and Transparent Multilayer MoS<sub>2</sub> Transistors with Graphene Electrodes. Small, 2013, 9, 3295-3300. | 10.0 | 189 |
| 5 | Electrical and Optical Characterization of MoS<sub>2</sub> with Sulfur Vacancy Passivation by Treatment with Alkanethiol Molecules. ACS Nano, 2015, 9, 8044-8053. | 14.6 | 185 |
| 6 | Photoelectron Spectroscopic Imaging and Device Applications of Large-Area Patternable Single-Layer MoS<sub>2</sub> Synthesized by Chemical Vapor Deposition. ACS Nano, 2014, 8, 4961-4968. | 14.6 | 117 |
| 7 | Thermodynamically Stable Synthesis of Largeâ€Scale and Highly Crystalline Transition Metal Dichalcogenide Monolayers and their Unipolar nâ€“n Heterojunction Devices. Advanced Materials, 2017, 29, 1702206. | 21.0 | 116 |
| 8 | Efficient bulk-heterojunction photovoltaic cells with transparent multi-layer graphene electrodes. Organic Electronics, 2010, 11, 1864-1869. | 2.6 | 113 |
| 9 | Enhancement of photodetection characteristics of MoS<sub>2</sub>field effect transistors using surface treatment with copper phthalocyanine. Nanoscale, 2015, 7, 18780-18788. | 5.6 | 101 |
| 10 | Irradiation Effects of High-Energy Proton Beams on MoS<sub>2</sub> Field Effect Transistors. ACS Nano, 2014, 8, 2774-2781. | 14.6 | 100 |
| 11 | Novel Nonvolatile Memory with Multibit Storage Based on a ZnO Nanowire Transistor. Nano Letters, 2010, 10, 4316-4320. | 9.1 | 96 |
| 12 | Passivation effects on ZnO nanowire field effect transistors under oxygen, ambient, and vacuum environments. Applied Physics Letters, 2008, 92, 263109. | 3.3 | 93 |
| 13 | Piezoelectric Effect on the Electronic Transport Characteristics of ZnO Nanowire Fieldâ€Effect Transistors on Bent Flexible Substrates. Advanced Materials, 2008, 20, 4557-4562. | 21.0 | 88 |
| 14 | Robust and stretchable indium gallium zinc oxide-based electronic textiles formed by cilia-assisted transfer printing. Nature Communications, 2016, 7, 11477. | 12.8 | 73 |
| 15 | Fabrication of TiO2 nanotubes by using electrodeposited ZnO nanorod template and their application to hybrid solar cells. Electrochimica Acta, 2008, 53, 2560-2566. | 5.2 | 70 |
| 16 | Tuning of the Electronic Characteristics of ZnO Nanowire Field Effect Transistors by Proton Irradiation. ACS Nano, 2010, 4, 811-818. | 14.6 | 62 |
| 17 | Electrochemical properties for high surface area and improved electrical conductivity of platinum-embedded porous carbon nanofibers. Journal of Power Sources, 2015, 274, 536-541. | 7.8 | 62 |
| 18 | Enhanced energy harvesting based on surface morphology engineering of P(VDF-TrFE) film. Nano Energy, 2015, 16, 524-532. | 16.0 | 60 |

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|---|---|---|---|
| 19 | Radiation hardness of the electrical properties of carbon nanotube network field effect transistors under high-energy proton irradiation. Nanotechnology, 2006, 17, 5675-5680. | 2.6 | 54 |
| 20 | Hydrogen-Induced Morphotropic Phase Transformation of Single-Crystalline Vanadium Dioxide Nanobeams. Nano Letters, 2013, 13, 1822-1828. | 9.1 | 53 |
| 21 | Realization of highly reproducible ZnO nanowire field effect transistors with n-channel depletion and enhancement modes. Applied Physics Letters, 2007, 90, 243103. | 3.3 | 52 |
| 22 | Enhancement in the photodetection of ZnO nanowires by introducing surface-roughness-induced traps. Nanotechnology, 2011, 22, 205204. | 2.6 | 52 |
| 23 | Low frequency noise characterizations of ZnO nanowire field effect transistors. Journal of Applied Physics, 2007, 101, 044313. | 2.5 | 51 |
| 24 | Influence of surface structure on the phonon-assisted emission process in the ZnO nanowires grown on homoepitaxial films. Applied Physics Letters, 2009, 94, . | 3.3 | 46 |
| 25 | Electrical Properties of Surface-Tailored ZnO Nanowire Field-Effect Transistors. IEEE Transactions on Electron Devices, 2008, 55, 3020-3029. | 3.0 | 44 |
| 26 | Nonvolatile Memory Functionality of ZnO Nanowire Transistors Controlled by Mobile Protons. ACS Nano, 2011, 5, 558-564. | 14.6 | 40 |
| 27 | Characteristics of a pressure sensitive touch sensor using a piezoelectric PVDF-TrFE/MoS<sub>2</sub> stack. Nanotechnology, 2013, 24, 475501. | 2.6 | 39 |
| 28 | Deep-ultraviolet sensing characteristics of transparent and flexible IGZO thin film transistors. Journal of Alloys and Compounds, 2020, 817, 152788. | 5.5 | 37 |
| 29 | Logic inverters composed of controlled depletion-mode and enhancement-mode ZnO nanowire transistors. Applied Physics Letters, 2009, 94, 173118. | 3.3 | 32 |
| 30 | In situ probing of doping- and stress-mediated phase transitions in a single-crystalline VO2 nanobeam by spatially resolved Raman spectroscopy. Nanoscale, 2014, 6, 8068. | 5.6 | 32 |
| 31 | Hybrid Complementary Logic Circuits of Oneâ€Dimensional Nanomaterials with Adjustment of Operation Voltage. Advanced Materials, 2009, 21, 2156-2160. | 21.0 | 30 |
| 32 | Channel-length and gate-bias dependence of contact resistance and mobility for In2O3 nanowire field effect transistors. Journal of Applied Physics, 2007, 102, 084508. | 2.5 | 28 |
| 33 | Effects of surface roughness on the electrical characteristics of ZnO nanowire field effect transistors. Applied Surface Science, 2008, 254, 7559-7564. | 6.1 | 28 |
| 34 | Effects of channel-length scaling on In2O3 nanowire field effect transistors studied by conducting atomic force microscopy. Applied Physics Letters, 2007, 90, 173106. | 3.3 | 27 |
| 35 | Electrical properties of ZnO nanowire field effect transistors with varying high-kâ€ˆAl2O3 dielectric thickness. Journal of Applied Physics, 2010, 107, . | 2.5 | 27 |
| 36 | Automated Assembly of Wafer-Scale 2D TMD Heterostructures of Arbitrary Layer Orientation and Stacking Sequence Using Water Dissoluble Salt Substrates. Nano Letters, 2020, 20, 3925-3934. | 9.1 | 25 |

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|---|---|---|---|
| 37 | Temperature-dependent electronic charge transport characteristics at MoS2/p-type Ge heterojunctions. Journal of Alloys and Compounds, 2018, 757, 221-227. | 5.5 | 24 |
| 38 | Low-resistance Al-based reflectors for high-power GaN-based flip-chip light-emitting diodes. Applied Physics Letters, 2005, 86, 133503. | 3.3 | 23 |
| 39 | The influence of surface chemical dynamics on electrical and optical properties of ZnO nanowire field effect transistors. Nanotechnology, 2009, 20, 505202. | 2.6 | 23 |
| 40 | Ultraviolet Wavelength-Dependent Optoelectronic Properties in Two-Dimensional NbSe<sub>2</sub>â€“WSe<sub>2</sub> van der Waals Heterojunction-Based Field-Effect Transistors. ACS Applied Materials & Interfaces, 2017, 9, 41537-41545. | 8.0 | 23 |
| 41 | Electrochemical and electrocatalytic reaction characteristics of boron-incorporated graphene viaÂa simple spin-on dopant process. Journal of Materials Chemistry A, 2018, 6, 7351-7356. | 10.3 | 23 |
| 42 | Tuning of operation mode of ZnO nanowire field effect transistors by solvent-driven surface treatment. Nanotechnology, 2009, 20, 475702. | 2.6 | 21 |
| 43 | Highly Reflective and Low Resistance Indium Tin Oxide/Ag Ohmic Contacts to p-Type GaN for Flip-Chip Light Emitting Diodes. Electrochemical and Solid-State Letters, 2005, 8, G320. | 2.2 | 18 |
| 44 | Probing the photothermally induced phase transitions in single-crystalline vanadium dioxide nanobeams. Nanotechnology, 2013, 24, 345701. | 2.6 | 18 |
| 45 | Silver nanowire-network-film-coated soft substrates with wrinkled surfaces for use as stretchable surface enhanced Raman scattering sensors. Journal of Alloys and Compounds, 2021, 859, 157862. | 5.5 | 18 |
| 46 | Metrology for the Electrical Characterization of Semiconductor Nanowires. IEEE Transactions on Electron Devices, 2008, 55, 3086-3095. | 3.0 | 17 |
| 47 | Highly sensitive multiplex-detection of surface-enhanced Raman scattering via self-assembly arrays of porous AuAg nanoparticles with built-in nanogaps. Journal of Alloys and Compounds, 2021, 888, 161504. | 5.5 | 16 |
| 48 | The influence of interfacial tensile strain on the charge transport characteristics of MoS<sub>2</sub>-based vertical heterojunction devices. Nanoscale, 2016, 8, 17598-17607. | 5.6 | 15 |
| 49 | Investigation of threshold voltage instability induced by gate bias stress in ZnO nanowire field effect transistors. Nanotechnology, 2012, 23, 485201. | 2.6 | 14 |
| 50 | Substrate-mediated strain effect on the role of thermal heating and electric field on metal-insulator transition in vanadium dioxide nanobeams. Scientific Reports, 2015, 5, 10861. | 3.3 | 14 |
| 51 | Carrier conduction mechanisms of WSe2/p-type Ge epilayer heterojunction depending on the measurement temperature and applied bias. Journal of Alloys and Compounds, 2020, 842, 155843. | 5.5 | 14 |
| 52 | Emerging Applications of Liquid Crystals Based on Nanotechnology. Materials, 2014, 7, 2044-2061. | 2.9 | 13 |
| 53 | Influence of the contact interface on the electrical characteristics of a ZnO microwire with silver paste electrodes. Journal of Alloys and Compounds, 2016, 681, 75-80. | 5.5 | 12 |
| 54 | Hydrogen plasma-mediated modification of the electrical transport properties of ZnO nanowire field effect transistors. Nanotechnology, 2015, 26, 125202. | 2.6 | 11 |

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|---|---|---|---|
| 55 | Effects of Applied Voltages on the Charge Transport Properties in a ZnO Nanowire Field Effect Transistor. Materials, 2020, 13, 268. | 2.9 | 11 |
| 56 | Defect-mediated modulation of optical properties in vertically aligned ZnO nanowires via substrate-assisted Ga incorporation. Nanotechnology, 2015, 26, 145202. | 2.6 | 10 |
| 57 | Wettability effects of graphene oxide aqueous solution in photodetectors based on graphene oxide/silicon heterojunctions via ultraviolet ozone treatment. Journal of Alloys and Compounds, 2017, 698, 384-389. | 5.5 | 10 |
| 58 | Metastable state-induced consecutive step-like negative differential resistance behaviors in single crystalline VO<sub>2</sub> nanobeams. Nanoscale, 2017, 9, 8200-8206. | 5.6 | 9 |
| 59 | Reflective and Low-Resistance Znâˆ•Rh Contacts to p-Type GaN for Flip-Chip Light-Emitting Diodes. Electrochemical and Solid-State Letters, 2005, 8, G227. | 2.2 | 8 |
| 60 | Formation of High-Quality Ag-Based Ohmic Contact to p-Type GaN for UV LEDs Using a Tin-Zinc Oxide Interlayer. Electrochemical and Solid-State Letters, 2005, 8, G280. | 2.2 | 7 |
| 61 | Interface effect in pentacene field-effect transistors from high energy proton beam irradiation. Organic Electronics, 2015, 27, 240-246. | 2.6 | 7 |
| 62 | Interplay between temperature effects and surface recombination process in UV photoresponse of ZnO nanowires. Applied Surface Science, 2015, 324, 512-516. | 6.1 | 7 |
| 63 | Protein Biophotosensitizer-Based IGZO Photo-thin Film Transistors for Monitoring Harmful Ultraviolet Light. ACS Applied Bio Materials, 2019, 2, 3030-3037. | 4.6 | 7 |
| 64 | Plasmonic Coreâ€“Shellâ€“Satellites with Abundant Electromagnetic Hotspots for Highly Sensitive and Reproducible SERS Detection. International Journal of Molecular Sciences, 2021, 22, 12191. | 4.1 | 7 |
| 65 | Strain effects in a single ZnO microwire with wavy configurations. Nanotechnology, 2013, 24, 455703. | 2.6 | 6 |
| 66 | Voltage sweep direction-dependent metal-insulator transition in a single-crystalline VO 2 nanobeam embedded in a insulating layer. Journal of Alloys and Compounds, 2017, 720, 445-450. | 5.5 | 6 |
| 67 | Negative differential resistance behavior in a single-crystalline vanadium dioxide nanobeam without epitaxial interfacial strain. Applied Surface Science, 2020, 509, 144779. | 6.1 | 6 |
| 68 | Enhanced Ultraviolet Photoresponse Characteristics of Indium Gallium Zinc Oxide Photo-Thin-Film Transistors Enabled by Surface Functionalization of Biomaterials for Real-Time Ultraviolet Monitoring. ACS Applied Materials & Interfaces, 2021, 13, 47784-47792. | 8.0 | 6 |
| 69 | Formation of a core-shell-like vanadium dioxide nanobeam via reduction and surface oxidation and its metal-insulator phase transition behavior. Applied Surface Science, 2018, 455, 1185-1191. | 6.1 | 5 |
| 70 | Dose-dependent effect of proton irradiation on electrical properties of WSe<sub>2</sub> ambipolar field effect transistors. Nanoscale, 2019, 11, 13961-13967. | 5.6 | 5 |
| 71 | High transparency of Agâˆ•Znâ€“Ni solidâ€“solution ohmic contacts for GaN-based ultraviolet light-emitting diodes. Applied Physics Letters, 2005, 86, 102102. | 3.3 | 4 |
| 72 | UV photoconductivity characteristics of ZnO nanowire field effect transistor treated by proton irradiation. Thin Solid Films, 2012, 520, 3624-3628. | 1.8 | 4 |

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|---|---|---|---|
| 73 | Effect of High-Energy Proton Irradiation of ZnO-Nanowire Field-Effect Transistors. Journal of the Korean Physical Society, 2008, 52, 848-852. | 0.7 | 4 |
| 74 | Proton Irradiation-Induced Electrostatic Modulation in ZnO Nanowire Field-Effect Transistors With Bilayer Gate Dielectric. IEEE Nanotechnology Magazine, 2012, 11, 918-923. | 2.0 | 3 |
| 75 | Phase Transition-Induced Temperature-Dependent Phonon Shifts in Molybdenum Disulfide Monolayers Interfaced with a Vanadium Dioxide Film. ACS Applied Materials & Interfaces, 2021, 13, 3426-3434. | 8.0 | 3 |
| 76 | Two-dimensional arrays self-assembled via interference of concentration modulation waves in drying solutions. Materials Horizons, 2019, 6, 507-514. | 12.2 | 2 |
| 77 | Core-shell heterostructure-enabled stress engineering in vanadium dioxide nanobeams. Applied Materials Today, 2021, 25, 101244. | 4.3 | 2 |
| 78 | Noise in ZnO Nanowire Field Effect Transistors. Journal of Nanoscience and Nanotechnology, 2009, 9, 1041-1044. | 0.9 | 1 |
| 79 | Characterization of ZnO nanowire field-effect transistors exposed to high energy proton radiation. , 2006, , . | | 0 |
| 80 | Electronic transport in indium oxide nanowire field effect transistors. , 2006, , . | | 0 |
| 81 | Random Telegraph Signals and 1/f Noise in ZnO Nanowire Field Effect Transistors. , 2007, , . | | 0 |
| 82 | Measurements for the reliability and electrical characterization of semiconductor nanowires. , 2008, , . | | 0 |
| 83 | Self-protective GaInN-based light-emitting diodes with VO2 nanowires. Nanoscale, 2019, 11, 18444-18448. | 5.6 | 0 |
| 84 | Fabrication and characterization of directly-assembled ZnO nanowire field effect transistors with polymer gate dielectrics. Journal of Nanoscience and Nanotechnology, 2007, 7, 4101-5. | 0.9 | 0 |