

Won-Tae Koo

List of Publications by Year in descending order

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54
papers

4,014
citations

101543

36
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149698

56
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57
all docs

57
docs citations

57
times ranked

4453
citing authors

#	ARTICLE	IF	CITATIONS
1	Metal-Organic Frameworks for Chemiresistive Sensors. <i>CheM</i> , 2019, 5, 1938-1963.	11.7	419
2	Heterogeneous Sensitization of Metal@Organic Framework Driven Metal@Metal Oxide Complex Catalysts on an Oxide Nanofiber Scaffold Toward Superior Gas Sensors. <i>Journal of the American Chemical Society</i> , 2016, 138, 13431-13437.	13.7	352
3	Nanoscale PdO Catalyst Functionalized Co ₃ O ₄ Hollow Nanocages Using MOF Templates for Selective Detection of Acetone Molecules in Exhaled Breath. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 8201-8210.	8.0	240
4	Accelerating Palladium Nanowire H ₂ Sensors Using Engineered Nanofiltration. <i>ACS Nano</i> , 2017, 11, 9276-9285.	14.6	190
5	Metal@Organic Framework Templated Catalysts: Dual Sensitization of PdO@ZnO Composite on Hollow SnO ₂ Nanotubes for Selective Acetone Sensors. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 18069-18077.	8.0	173
6	Chemiresistive Hydrogen Sensors: Fundamentals, Recent Advances, and Challenges. <i>ACS Nano</i> , 2020, 14, 14284-14322.	14.6	143
7	Metal Organic Framework-Templated Chemiresistor: Sensing Type Transition from P-to-N Using Hollow Metal Oxide Polyhedron via Galvanic Replacement. <i>Journal of the American Chemical Society</i> , 2017, 139, 11868-11876.	13.7	136
8	Exceptional High Performance of Pt-Based Bimetallic Catalysts for Exclusive Detection of Exhaled Biomarkers. <i>Advanced Materials</i> , 2017, 29, 1700737.	21.0	113
9	Highly sensitive and selective acetone sensing performance of WO ₃ nanofibers functionalized by Rh ₂ O ₃ nanoparticles. <i>Sensors and Actuators B: Chemical</i> , 2016, 224, 185-192.	7.8	106
10	Single-Atom Pt Stabilized on One-Dimensional Nanostructure Support <i>via</i> Carbon Nitride/SnO ₂ Heterojunction Trapping. <i>ACS Nano</i> , 2020, 14, 11394-11405.	14.6	98
11	Catalyst-decorated hollow WO ₃ nanotubes using layer-by-layer self-assembly on polymeric nanofiber templates and their application in exhaled breath sensor. <i>Sensors and Actuators B: Chemical</i> , 2016, 223, 301-310.	7.8	97
12	Nanoscale Pt ₂ Catalysts-Loaded SnO ₂ Multichannel Nanofibers toward Highly Sensitive Acetone Sensor. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 2016-2025.	8.0	96
13	Few-Layered WS ₂ Nanoplates Confined in Co, N-Doped Hollow Carbon Nanocages: Abundant WS ₂ Edges for Highly Sensitive Gas Sensors. <i>Advanced Functional Materials</i> , 2018, 28, 1802575.	14.9	93
14	Metal-Organic Framework Templated Synthesis of Ultrasmall Catalyst Loaded ZnO/ZnCo ₂ O ₄ Hollow Spheres for Enhanced Gas Sensing Properties. <i>Scientific Reports</i> , 2017, 7, 45074.	3.3	92
15	Hybrid crystalline-ITO/metal nanowire mesh transparent electrodes and their application for highly flexible perovskite solar cells. <i>NPG Asia Materials</i> , 2016, 8, e282-e282.	7.9	89
16	Bimodally Porous WO ₃ Microbelts Functionalized with Pt Catalysts for Selective H ₂ S Sensors. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 20643-20651.	8.0	87
17	Hollow Pd@Ag Composite Nanowires for Fast Responding and Transparent Hydrogen Sensors. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 39464-39474.	8.0	82
18	Hierarchical Metal@Organic Framework-Assembled Membrane Filter for Efficient Removal of Particulate Matter. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 19957-19963.	8.0	74

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19	Pt-Functionalized PdO Nanowires for Room Temperature Hydrogen Gas Sensors. ACS Sensors, 2018, 3, 2152-2158.	7.8	70
20	MOF derived ZnCo ₂ O ₄ porous hollow spheres functionalized with Ag nanoparticles for a long-cycle and high-capacity lithium ion battery anode. Journal of Materials Chemistry A, 2017, 5, 22717-22725.	10.3	69
21	High-Resolution, Fast, and Shape-Conformable Hydrogen Sensor Platform: Polymer Nanofiber Yarn Coupled with Nanograined Pd@Pt. ACS Nano, 2019, 13, 6071-6082.	14.6	68
22	Metal Chelation Assisted In Situ Migration and Functionalization of Catalysts on Peapod-Like Hollow SnO ₂ toward a Superior Chemical Sensor. Small, 2016, 12, 5989-5997.	10.0	61
23	Chitosan-templated Pt nanocatalyst loaded mesoporous SnO ₂ nanofibers: a superior chemiresistor toward acetone molecules. Nanoscale, 2018, 10, 13713-13721.	5.6	60
24	In Situ Coupling of Multidimensional MOFs for Heterogeneous Metal-Oxide Architectures: Toward Sensitive Chemiresistors. ACS Central Science, 2018, 4, 929-937.	11.3	59
25	Catalytic Metal Nanoparticles Embedded in Conductive Metal-Organic Frameworks for Chemiresistors: Highly Active and Conductive Porous Materials. Advanced Science, 2019, 6, 1900250.	11.2	59
26	Catalyst-loaded porous WO ₃ nanofibers using catalyst-decorated polystyrene colloid templates for detection of biomarker molecules. Chemical Communications, 2015, 51, 2609-2612.	4.1	57
27	Electrospun Nanostructures for High Performance Chemiresistive and Optical Sensors. Macromolecular Materials and Engineering, 2017, 302, 1600569.	3.6	55
28	Metal-Organic Framework-Templated PdO-Co ₃ O ₄ Nanocubes Functionalized by SWCNTs: Improved NO ₂ Reaction Kinetics on Flexible Heating Film. ACS Applied Materials & Interfaces, 2017, 9, 40593-40603.	8.0	55
29	Hierarchically interconnected porosity control of catalyst-loaded WO ₃ nanofiber scaffold: Superior acetone sensing layers for exhaled breath analysis. Sensors and Actuators B: Chemical, 2018, 259, 616-625.	7.8	53
30	The Design and Science of Polyelemental Nanoparticles. ACS Nano, 2020, 14, 6407-6413.	14.6	53
31	2D layer assembly of Pt-ZnO nanoparticles on reduced graphene oxide for flexible NO ₂ sensors. Sensors and Actuators B: Chemical, 2021, 331, 129371.	7.8	52
32	Sub-Parts-per-Million Hydrogen Sulfide Colorimetric Sensor: Lead Acetate Anchored Nanofibers toward Halitosis Diagnosis. Analytical Chemistry, 2018, 90, 8769-8775.	6.5	47
33	Hydrogen Sensors Based on MoS ₂ Hollow Architectures Assembled by Pickering Emulsion. ACS Nano, 2020, 14, 9652-9661.	14.6	47
34	Feasible Defect Engineering by Employing Metal Organic Framework Templates into One-Dimensional Metal Oxides for Battery Applications. ACS Applied Materials & Interfaces, 2018, 10, 20540-20549.	8.0	46
35	Heterogeneous, Porous 2D Oxide Sheets via Rapid Galvanic Replacement: Toward Superior HCHO Sensing Application. Advanced Functional Materials, 2019, 29, 1903012.	14.9	41
36	Pore-Size-Tuned Graphene Oxide Membrane as a Selective Molecular Sieving Layer: Toward Ultrasensitive Chemiresistors. Analytical Chemistry, 2020, 92, 957-965.	6.5	38

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37	Bioinspired Cocatalysts Decorated WO ₃ Nanotube Toward Unparalleled Hydrogen Sulfide Chemiresistor. <i>ACS Sensors</i> , 2018, 3, 1164-1173.	7.8	36
38	Large-area synthesis of nanoscopic catalyst-decorated conductive MOF film using microfluidic-based solution shearing. <i>Nature Communications</i> , 2021, 12, 4294.	12.8	36
39	Perovskite La _{0.75} Sr _{0.25} Cr _{0.5} Mn _{0.5} O ₃ sensitized SnO ₂ fiber-in-tube scaffold: highly selective and sensitive formaldehyde sensing. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10543-10551.	10.3	29
40	Graphene oxide templating: facile synthesis of morphology engineered crumpled SnO ₂ nanofibers for superior chemiresistors. <i>Journal of Materials Chemistry A</i> , 2018, 6, 13825-13834.	10.3	28
41	Heterogeneous Metal Oxide-Graphene Thorn-Bush Single Fiber as a Freestanding Chemiresistor. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 10208-10217.	8.0	27
42	Pt nanoparticles functionalized tungsten oxynitride hybrid chemiresistor: Low-temperature NO ₂ sensing. <i>Sensors and Actuators B: Chemical</i> , 2018, 273, 1269-1277.	7.8	23
43	Confinement of Ultrasmall Bimetallic Nanoparticles in Conductive Metal-Organic Frameworks via Site-Specific Nucleation. <i>Advanced Materials</i> , 2021, 33, e2101216.	21.0	23
44	Hydrogen Sensors from Composites of Ultra-small Bimetallic Nanoparticles and Porous Ion-Exchange Polymers. <i>CheM</i> , 2020, 6, 2746-2758.	11.7	19
45	Glass-Fabric Reinforced Ag Nanowire/Siloxane Composite Heater Substrate: Sub-10 nm Metal@Metal Oxide Nanosheet for Sensitive Flexible Sensing Platform. <i>Small</i> , 2018, 14, e1802260.	10.0	17
46	Chemiresistive acetylene sensor fabricated from Ga-doped ZnO nanofibers functionalized with Pt catalysts. <i>Sensors and Actuators B: Chemical</i> , 2021, 343, 130137.	7.8	16
47	An Impedance-Transduced Chemiresistor with a Porous Carbon Channel for Rapid, Nonenzymatic, Glucose Sensing. <i>Analytical Chemistry</i> , 2018, 90, 9338-9346.	6.5	13
48	Universal Synthesis of Porous Inorganic Nanosheets via Graphene-Cellulose Templating Route. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 34100-34108.	8.0	13
49	Surface hydration of fibrous filters by using water-absorbing metal-organic frameworks for efficient ultrafine particulate matter removal. <i>Chemical Engineering Journal</i> , 2022, 446, 136710.	12.7	13
50	Elaborate Manipulation for Sub-10 nm Hollow Catalyst Sensitized Heterogeneous Oxide Nanofibers for Room Temperature Chemical Sensors. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 24821-24829.	8.0	12
51	Chemiresistors: Catalytic Metal Nanoparticles Embedded in Conductive Metal-Organic Frameworks for Chemiresistors: Highly Active and Conductive Porous Materials (<i>Adv. Sci.</i> 21/2019). <i>Advanced Science</i> , 2019, 6, 1970126.	11.2	3
52	Confinement of Ultrasmall Bimetallic Nanoparticles in Conductive Metal-Organic Frameworks via Site-Specific Nucleation (<i>Adv. Mater.</i> 38/2021). <i>Advanced Materials</i> , 2021, 33, 2170302.	21.0	3
53	Gas Sensors: Few-Layered WS ₂ Nanoplates Confined in Co, N-Doped Hollow Carbon Nanocages: Abundant WS ₂ Edges for Highly Sensitive Gas Sensors (<i>Adv. Funct. Mater.</i>) Tj ETQq1 1 0.784314 rgbT / Over	14.9	0
54	2D Oxide Sensors: Heterogeneous, Porous 2D Oxide Sheets via Rapid Galvanic Replacement: Toward Superior HCHO Sensing Application (<i>Adv. Funct. Mater.</i> 42/2019). <i>Advanced Functional Materials</i> , 2019, 29, 1970290.	14.9	0