Won-Tae Koo

List of Publications by Citations

54 papers	2,637 citations	30 h-index	51 g-index
57 ext. papers	3,359 ext. citations	12.1 avg, IF	5.68 L-index

#	Paper	IF	Citations
54	Heterogeneous Sensitization of Metal-Organic Framework Driven Metal@Metal Oxide Complex Catalysts on an Oxide Nanofiber Scaffold Toward Superior Gas Sensors. *Journal of the American Chemical Society*, **2016**, 138, 13431-13437	16.4	268
53	Metal-Organic Frameworks for Chemiresistive Sensors. *CheM*, **2019**, 5, 1938-1963	16.2	216
52	Nanoscale PdO Catalyst Functionalized CoO Hollow Nanocages Using MOF Templates for Selective Detection of Acetone Molecules in Exhaled Breath. *ACS Applied Materials & Interfaces*, **2017**, 9, 8201-8210	9.5	182
51	Metal-Organic Framework Templated Catalysts: Dual Sensitization of PdO-ZnO Composite on Hollow SnO Nanotubes for Selective Acetone Sensors. *ACS Applied Materials & Interfaces*, **2017** , 9, 18069-18077	9.5	127
50	Accelerating Palladium Nanowire H Sensors Using Engineered Nanofiltration. *ACS Nano*, **2017**, 11, 9276-9285	13.7	123
49	Metal Organic Framework-Templated Chemiresistor: Sensing Type Transition from P-to-N Using Hollow Metal Oxide Polyhedron via Galvanic Replacement. *Journal of the American Chemical Society* , **2017**, 139, 11868-11876	16.4	101
48	Highly sensitive and selective acetone sensing performance of WO3 nanofibers functionalized by Rh2O3 nanoparticles. *Sensors and Actuators B: Chemical*, **2016**, 224, 185-192	8.5	88
47	Exceptional High-Performance of Pt-Based Bimetallic Catalysts for Exclusive Detection of Exhaled Biomarkers. *Advanced Materials*, **2017**, 29, 1700737	24	84
46	Catalyst-decorated hollow WO3 nanotubes using layer-by-layer self-assembly on polymeric nanofiber templates and their application in exhaled breath sensor. *Sensors and Actuators B: Chemical*, **2016**, 223, 301-310	8.5	78
45	Hybrid crystalline-ITO/metal nanowire mesh transparent electrodes and their application for highly flexible perovskite solar cells. *NPG Asia Materials*, **2016**, 8, e282-e282	10.3	76
44	Metal-Organic Framework Templated Synthesis of Ultrasmall Catalyst Loaded ZnO/ZnCoO Hollow Spheres for Enhanced Gas Sensing Properties. *Scientific Reports*, **2017**, 7, 45074	4.9	74
43	Nanoscale PtO Catalysts-Loaded SnO Multichannel Nanofibers toward Highly Sensitive Acetone Sensor. *ACS Applied Materials & Interfaces*, **2018**, 10, 2016-2025	9.5	73
42	Bimodally Porous WO Microbelts Functionalized with Pt Catalysts for Selective HS Sensors. *ACS Applied Materials & Interfaces*, **2018**, 10, 20643-20651	9.5	63
41	Hollow Pd-Ag Composite Nanowires for Fast Responding and Transparent Hydrogen Sensors. *ACS Applied Materials & Interfaces*, **2017**, 9, 39464-39474	9.5	58
40	Few-Layered WS2 Nanoplates Confined in Co, N-Doped Hollow Carbon Nanocages: Abundant WS2 Edges for Highly Sensitive Gas Sensors. *Advanced Functional Materials*, **2018**, 28, 1802575	15.6	53
39	MOF derived ZnCo2O4 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	13	52
38	Hierarchical Metal-Organic Framework-Assembled Membrane Filter for Efficient Removal of Particulate Matter. *ACS Applied Materials & Interfaces*, **2018**, 10, 19957-19963	9.5	52

37	Catalyst-loaded porous WO3 nanofibers using catalyst-decorated polystyrene colloid templates for detection of biomarker molecules. *Chemical Communications*, **2015**, 51, 2609-12	5.8	47
36	Metal Chelation Assisted In Situ Migration and Functionalization of Catalysts on Peapod-Like Hollow SnO toward a Superior Chemical Sensor. *Small*, **2016**, 12, 5989-5997	11	47
35	Pt-Functionalized PdO Nanowires for Room Temperature Hydrogen Gas Sensors. *ACS Sensors*, **2018**, 3, 2152-2158	9.2	46
34	Electrospun Nanostructures for High Performance Chemiresistive and Optical Sensors. *Macromolecular Materials and Engineering*, **2017**, 302, 1600569	3.9	43
33	Hierarchically interconnected porosity control of catalyst-loaded WO3 nanofiber scaffold: Superior acetone sensing layers for exhaled breath analysis. *Sensors and Actuators B: Chemical*, **2018**, 259, 616-625	8.5	43
32	Chitosan-templated Pt nanocatalyst loaded mesoporous SnO nanofibers: a superior chemiresistor toward acetone molecules. *Nanoscale*, **2018**, 10, 13713-13721	7.7	42
31	Chemiresistive Hydrogen Sensors: Fundamentals, Recent Advances, and Challenges. *ACS Nano*, **2020**, 14, 14284-14322	16.7	41
30	In Situ Coupling of Multidimensional MOFs for Heterogeneous Metal-Oxide Architectures: Toward Sensitive Chemiresistors. *ACS Central Science*, **2018**, 4, 929-937	16.8	38
29	Metal-Organic Framework-Templated PdO-CoO Nanocubes Functionalized by SWCNTs: Improved NO Reaction Kinetics on Flexible Heating Film. *ACS Applied Materials & Interfaces*, **2017**, 9, 40593-40603	9.5	37
28	High-Resolution, Fast, and Shape-Conformable Hydrogen Sensor Platform: Polymer Nanofiber Yarn Coupled with Nanograined Pd@Pt. *ACS Nano*, **2019**, 13, 6071-6082	16.7	35
27	Single-Atom Pt Stabilized on One-Dimensional Nanostructure Support Carbon Nitride/SnO Heterojunction Trapping. *ACS Nano*, **2020**, 14, 11394-11405	16.7	35
26	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	9.5	34
25	Sub-Parts-per-Million Hydrogen Sulfide Colorimetric Sensor: Lead Acetate Anchored Nanofibers toward Halitosis Diagnosis. *Analytical Chemistry*, **2018**, 90, 8769-8775	7.8	34
24	Heterogeneous, Porous 2D Oxide Sheets via Rapid Galvanic Replacement: Toward Superior HCHO Sensing Application. *Advanced Functional Materials*, **2019**, 29, 1903012	15.6	30
23	The Design and Science of Polyelemental Nanoparticles. *ACS Nano*, **2020**, 14, 6407-6413	16.7	29
22	Bioinspired Cocatalysts Decorated WO Nanotube Toward Unparalleled Hydrogen Sulfide Chemiresistor. *ACS Sensors*, **2018**, 3, 1164-1173	9.2	28
21	Catalytic Metal Nanoparticles Embedded in Conductive Metal-Organic Frameworks for Chemiresistors: Highly Active and Conductive Porous Materials. *Advanced Science*, **2019**, 6, 1900250	13.6	26
20	Graphene oxide templating: facile synthesis of morphology engineered crumpled SnO2 nanofibers for superior chemiresistors. *Journal of Materials Chemistry A*, **2018**, 6, 13825-13834	13	24

19	Hydrogen Sensors Based on MoS Hollow Architectures Assembled by Pickering Emulsion. *ACS Nano*, **2020**, 14, 9652-9661	16.7	24
18	2D layer assembly of Pt-ZnO nanoparticles on reduced graphene oxide for flexible NO2 sensors. *Sensors and Actuators B: Chemical*, **2021**, 331, 129371	8.5	23
17	Perovskite La0.75Sr0.25Cr0.5Mn0.5O3 sensitized SnO2 fiber-in-tube scaffold: highly selective and sensitive formaldehyde sensing. *Journal of Materials Chemistry A*, **2018**, 6, 10543-10551	13	22
16	Pore-Size-Tuned Graphene Oxide Membrane as a Selective Molecular Sieving Layer: Toward Ultraselective Chemiresistors. *Analytical Chemistry*, **2020**, 92, 957-965	7.8	18
15	Heterogeneous Metal Oxide-Graphene Thorn-Bush Single Fiber as a Freestanding Chemiresistor. *ACS Applied Materials & Interfaces*, **2019**, 11, 10208-10217	9.5	17
14	Pt nanoparticles functionalized tungsten oxynitride hybrid chemiresistor: Low-temperature NO2 sensing. *Sensors and Actuators B: Chemical*, **2018**, 273, 1269-1277	8.5	16
13	Glass-Fabric Reinforced Ag Nanowire/Siloxane Composite Heater Substrate: Sub-10 nm Metal@Metal Oxide Nanosheet for Sensitive Flexible Sensing Platform. *Small*, **2018**, 14, e1802260	11	16
12	An Impedance-Transduced Chemiresistor with a Porous Carbon Channel for Rapid, Nonenzymatic, Glucose Sensing. *Analytical Chemistry*, **2018**, 90, 9338-9346	7.8	11
11	Elaborate Manipulation for Sub-10 nm Hollow Catalyst Sensitized Heterogeneous Oxide Nanofibers for Room Temperature Chemical Sensors. *ACS Applied Materials & Interfaces*, **2017**, 9, 24821-24829	9.5	9
10	Universal Synthesis of Porous Inorganic Nanosheets via Graphene-Cellulose Templating Route. *ACS Applied Materials & Interfaces*, **2019**, 11, 34100-34108	9.5	7
9	Hydrogen Sensors from Composites of Ultra-small Bimetallic Nanoparticles and Porous Ion-Exchange Polymers. *CheM*, **2020**, 6, 2746-2758	16.2	7
8	Large-area synthesis of nanoscopic catalyst-decorated conductive MOF film using microfluidic-based solution shearing. *Nature Communications*, **2021**, 12, 4294	17.4	6
7	Confinement of Ultrasmall Bimetallic Nanoparticles in Conductive Metal-Organic Frameworks via Site-Specific Nucleation. *Advanced Materials*, **2021**, 33, e2101216	24	6
6	Chemiresistive acetylene sensor fabricated from Ga-doped ZnO nanofibers functionalized with Pt catalysts. *Sensors and Actuators B: Chemical*, **2021**, 343, 130137	8.5	3
5	Chemiresistors: Catalytic Metal Nanoparticles Embedded in Conductive Metal–Organic Frameworks for Chemiresistors: Highly Active and Conductive Porous Materials (Adv. Sci. 21/2019). *Advanced Science*, **2019**, 6, 1970126	13.6	1
4	Gas Sensors: Few-Layered WS2 Nanoplates Confined in Co, N-Doped Hollow Carbon Nanocages: Abundant WS2 Edges for Highly Sensitive Gas Sensors (Adv. Funct. Mater. 36/2018). *Advanced Functional Materials*, **2018**, 28, 1870254	15.6	0
3	Confinement of Ultrasmall Bimetallic Nanoparticles in Conductive Metal–Organic Frameworks via Site-Specific Nucleation (Adv. Mater. 38/2021). *Advanced Materials*, **2021**, 33, 2170302	24	0
2	Surface hydration of fibrous filters by using water-absorbing metal–organic frameworks for efficient ultrafine particulate matter removal. *Chemical Engineering Journal*, **2022**, 446, 136710	14.7	0

1	2D Oxide Sensors: Heterogeneous, Porous 2D Oxide Sheets via Rapid Galvanic Replacement: Toward Superior HCHO Sensing Application (Adv. Funct. Mater. 42/2019). *Advanced Functional Materials*, **2019**, 29, 1970290	15.6