

Seon-Jin Choi

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.

89 papers	4,956 citations	41 h-index	70 g-index
98 ext. papers	5,839 ext. citations	9.5 avg, IF	6.06 L-index

#	Paper	IF	Citations
89	2D layered Mn and Ru oxide nanosheets for real-time breath humidity monitoring. <i>Applied Surface Science</i> , 2022 , 573, 151481	6.7	2
88	Metal-organic frameworks-driven ZnO-functionalized carbon nanotube fiber for NO ₂ sensor. <i>Journal of Sensor Science and Technology</i> , 2021 , 30, 369-375	0.3	1
87	Selective acetate detection using functional carbon nanotube fiber. <i>Journal of Sensor Science and Technology</i> , 2021 , 30, 357-363	0.3	
86	Rational design approaches of two-dimensional metal oxides for chemiresistive gas sensors: A comprehensive review. <i>MRS Bulletin</i> , 2021 , 46, 1080-1094	3.2	2
85	2D layer assembly of Pt-ZnO nanoparticles on reduced graphene oxide for flexible NO ₂ sensors. <i>Sensors and Actuators B: Chemical</i> , 2021 , 331, 129371	8.5	23
84	Flexible Chemiresistive Cyclohexanone Sensors Based on Single-Walled Carbon Nanotube-Polymer Composites. <i>ACS Sensors</i> , 2021 , 6, 3056-3062	9.2	4
83	Effect of metal/metal oxide catalysts on graphene fiber for improved NO ₂ sensing. <i>Sensors and Actuators B: Chemical</i> , 2021 , 344, 130231	8.5	1
82	Selective acetate recognition and sensing using SWCNTs functionalized with croconamides. <i>Sensors and Actuators B: Chemical</i> , 2021 , 346, 130461	8.5	2
81	Interpenetrating Polymer Semiconductor Nanonetwork Channel for Ultrasensitive, Selective, and Fast Recovered Chemodetection. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 55107-55115	9.5	2
80	Functional Single-Walled Carbon Nanotubes for Anion Sensing. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 28375-28382	9.5	10
79	Low-Thermal-Budget Doping of 2D Materials in Ambient Air Exemplified by Synthesis of Boron-Doped Reduced Graphene Oxide. <i>Advanced Science</i> , 2020 , 7, 1903318	13.6	3
78	Low-Thermal-Budget Doping: Low-Thermal-Budget Doping of 2D Materials in Ambient Air Exemplified by Synthesis of Boron-Doped Reduced Graphene Oxide (Adv. Sci. 7/2020). <i>Advanced Science</i> , 2020 , 7, 2070039	13.6	78
77	Porosity controlled 3D SnO ₂ spheres via electrostatic spray: Selective acetone sensors. <i>Sensors and Actuators B: Chemical</i> , 2020 , 304, 127350	8.5	27
76	Chemiresistors for the Real-Time Wireless Detection of Anions. <i>Advanced Functional Materials</i> , 2020 , 30, 1907087	15.6	10
75	Precision pH Sensor Based on WO Nanofiber-Polymer Composites and Differential Amplification. <i>ACS Sensors</i> , 2019 , 4, 2593-2598	9.2	20
74	Biocompatible Carbon Nanotube-Based Hybrid Microfiber for Implantable Electrochemical Actuator and Flexible Electronic Applications. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 20615-20627	9.5	22
73	All-carbon fiber-based chemical sensor: Improved reversible NO ₂ reaction kinetics. <i>Sensors and Actuators B: Chemical</i> , 2019 , 290, 293-301	8.5	18

72	Heterogeneous Metal Oxide-Graphene Thorn-Bush Single Fiber as a Freestanding Chemiresistor. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 10208-10217	9.5	17
71	Heterogeneous, Porous 2D Oxide Sheets via Rapid Galvanic Replacement: Toward Superior HCHO Sensing Application. <i>Advanced Functional Materials</i> , 2019 , 29, 1903012	15.6	30
70	Porous Ion Exchange Polymer Matrix for Ultrasmall Au Nanoparticle-Decorated Carbon Nanotube Chemiresistors. <i>Chemistry of Materials</i> , 2019 , 31, 5413-5420	9.6	12
69	2D Oxide Sensors: Heterogeneous, Porous 2D Oxide Sheets via Rapid Galvanic Replacement: Toward Superior HCHO Sensing Application (Adv. Funct. Mater. 42/2019). <i>Advanced Functional Materials</i> , 2019 , 29, 1970290	15.6	
68	Recent Developments in 2D Nanomaterials for Chemiresistive-Type Gas Sensors. <i>Electronic Materials Letters</i> , 2018 , 14, 221-260	2.9	120
67	Nitrogen-Doped Single Graphene Fiber with Platinum Water Dissociation Catalyst for Wearable Humidity Sensor. <i>Small</i> , 2018 , 14, e1703934	11	72
66	Hierarchically interconnected porosity control of catalyst-loaded WO ₃ nanofiber scaffold: Superior acetone sensing layers for exhaled breath analysis. <i>Sensors and Actuators B: Chemical</i> , 2018 , 259, 616-625	8.5	43
65	Material-Independent Nanotransfer onto a Flexible Substrate Using Mechanical-Interlocking Structure. <i>ACS Nano</i> , 2018 , 12, 4387-4397	16.7	17
64	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	15.6	53
63	Pt nanoparticles functionalized tungsten oxynitride hybrid chemiresistor: Low-temperature NO ₂ sensing. <i>Sensors and Actuators B: Chemical</i> , 2018 , 273, 1269-1277	8.5	16
62	Applications and Advances in Bioelectronic Noses for Odour Sensing. <i>Sensors</i> , 2018 , 18,	3.8	46
61	Abnormal Optoelectric Properties of Two-Dimensional Protonic Ruthenium Oxide with a Hexagonal Structure. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 22661-22668	9.5	6
60	Wireless Real-Time Temperature Monitoring of Blood Packages: Silver Nanowire-Embedded Flexible Temperature Sensors. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 44678-44685	9.5	42
59	Switchable Single-Walled Carbon Nanotube-Polymer Composites for CO Sensing. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 33373-33379	9.5	23
58	Gas Sensors: Few-Layered WS ₂ Nanoplates Confined in Co, N-Doped Hollow Carbon Nanocages: Abundant WS ₂ Edges for Highly Sensitive Gas Sensors (Adv. Funct. Mater. 36/2018). <i>Advanced Functional Materials</i> , 2018 , 28, 1870254	15.6	0
57	Sub-Parts-per-Million Hydrogen Sulfide Colorimetric Sensor: Lead Acetate Anchored Nanofibers toward Halitosis Diagnosis. <i>Analytical Chemistry</i> , 2018 , 90, 8769-8775	7.8	34
56	Bimodally Porous WO Microbelts Functionalized with Pt Catalysts for Selective HS Sensors. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 20643-20651	9.5	63
55	Bioinspired Cocatalysts Decorated WO Nanotube Toward Unparalleled Hydrogen Sulfide Chemiresistor. <i>ACS Sensors</i> , 2018 , 3, 1164-1173	9.2	28

54	Nanoscale PdO Catalyst Functionalized CoO Hollow Nanocages Using MOF Templates for Selective Detection of Acetone Molecules in Exhaled Breath. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 8201-8210	9.5	182
53	Optically Sintered 2D RuO ₂ Nanosheets: Temperature-Controlled NO ₂ Reaction. <i>Advanced Functional Materials</i> , 2017 , 27, 1606026	15.6	35
52	Metal-Organic Framework Templated Catalysts: Dual Sensitization of PdO-ZnO Composite on Hollow SnO Nanotubes for Selective Acetone Sensors. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 18069-18077	9.5	127
51	Innovative Nanosensor for Disease Diagnosis. <i>Accounts of Chemical Research</i> , 2017 , 50, 1587-1596	24.3	143
50	Facile synthetic method of catalyst-loaded ZnO nanofibers composite sensor arrays using bio-inspired protein cages for pattern recognition of exhaled breath. <i>Sensors and Actuators B: Chemical</i> , 2017 , 243, 166-175	8.5	36
49	Electrospun Nanostructures for High Performance Chemiresistive and Optical Sensors. <i>Macromolecular Materials and Engineering</i> , 2017 , 302, 1600569	3.9	43
48	Metal-Organic Framework Templated Synthesis of Ultrasmall Catalyst Loaded ZnO/ZnCoO Hollow Spheres for Enhanced Gas Sensing Properties. <i>Scientific Reports</i> , 2017 , 7, 45074	4.9	74
47	2D WS ₂ -edge functionalized multi-channel carbon nanofibers: effect of WS ₂ edge-abundant structure on room temperature NO ₂ sensing. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 8725-8732	13	89
46	Cu Microbelt Network Embedded in Colorless Polyimide Substrate: Flexible Heater Platform with High Optical Transparency and Superior Mechanical Stability. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 39650-39656	9.5	17
45	Metal-Organic Framework-Templated PdO-CoO Nanocubes Functionalized by SWCNTs: Improved NO Reaction Kinetics on Flexible Heating Film. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 40593-40603	9.5	37
44	Hollow Pd-Ag Composite Nanowires for Fast Responding and Transparent Hydrogen Sensors. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 39464-39474	9.5	58
43	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	9.5	9
42	Nanomechanical Encoding Method Using Enhanced Thermal Concentration on a Metallic Nanobridge. <i>ACS Nano</i> , 2017 , 11, 7781-7789	16.7	7
41	Exceptional High-Performance of Pt-Based Bimetallic Catalysts for Exclusive Detection of Exhaled Biomarkers. <i>Advanced Materials</i> , 2017 , 29, 1700737	24	84
40	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	16.4	101
39	WO ₃ nanofibers functionalized by protein-templated RuO ₂ nanoparticles as highly sensitive exhaled breath gas sensing layers. <i>Sensors and Actuators B: Chemical</i> , 2017 , 241, 1276-1282	8.5	39
38	Hierarchical ZnO Nanowires-loaded Sb-doped SnO ₂ -ZnO Micrograting Pattern via Direct Imprinting-assisted Hydrothermal Growth and Its Selective Detection of Acetone Molecules. <i>Scientific Reports</i> , 2016 , 6, 18731	4.9	29
37	Silver Nanowire Embedded Colorless Polyimide Heater for Wearable Chemical Sensors: Improved Reversible Reaction Kinetics of Optically Reduced Graphene Oxide. <i>Small</i> , 2016 , 12, 5826-5835	11	52

36	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	16.4	268
35	Metal Chelation Assisted In Situ Migration and Functionalization of Catalysts on Peapod-Like Hollow SnO toward a Superior Chemical Sensor. <i>Small</i> , 2016 , 12, 5989-5997	11	47
34	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	8.5	88
33	Coaxial electrospinning of WO ₃ nanotubes functionalized with bio-inspired Pd catalysts and their superior hydrogen sensing performance. <i>Nanoscale</i> , 2016 , 8, 9159-66	7.7	120
32	Protein-Encapsulated Catalysts: WO ₃ Nanofiber-Based Biomarker Detectors Enabled by Protein-Encapsulated Catalyst Self-Assembled on Polystyrene Colloid Templates (Small 7/2016). <i>Small</i> , 2016 , 12, 964-964	11	1
31	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	8.5	78
30	WO ₃ Nanofiber-Based Biomarker Detectors Enabled by Protein-Encapsulated Catalyst Self-Assembled on Polystyrene Colloid Templates. <i>Small</i> , 2016 , 12, 911-20	11	62
29	Rational Design of Highly Porous SnO ₂ Nanotubes Functionalized with Biomimetic Nanocatalysts for Direct Observation of Simulated Diabetes. <i>Advanced Functional Materials</i> , 2016 , 26, 4740-4748	15.6	115
28	Mesoporous WO ₃ Nanofibers with Protein-Templated Nanoscale Catalysts for Detection of Trace Biomarkers in Exhaled Breath. <i>ACS Nano</i> , 2016 , 10, 5891-9	16.7	173
27	Novel Templating Route Using Pt Infiltrated Block Copolymer Microparticles for Catalytic Pt Functionalized Macroporous WO ₃ Nanofibers and Its Application in Breath Pattern Recognition. <i>ACS Sensors</i> , 2016 , 1, 1124-1131	9.2	52
26	Ultrafast optical reduction of graphene oxide sheets on colorless polyimide film for wearable chemical sensors. <i>NPG Asia Materials</i> , 2016 , 8, e315-e315	10.3	60
25	Catalyst-loaded porous WO ₃ nanofibers using catalyst-decorated polystyrene colloid templates for detection of biomarker molecules. <i>Chemical Communications</i> , 2015 , 51, 2609-12	5.8	47
24	Highly efficient electronic sensitization of non-oxidized graphene flakes on controlled pore-loaded WO ₃ nanofibers for selective detection of H ₂ S molecules. <i>Scientific Reports</i> , 2015 , 5, 8067	4.9	65
23	Increasing Capacitance and Self-Resonant Frequency of the MEMS Switched Capacitor Using High- κ TiO ₂ and SU-8 Bridged Beam Structure. <i>Journal of Microelectromechanical Systems</i> , 2015 , 24, 1006-1015	2.5	3
22	Graphene-Based Composite Materials for Chemical Sensor Application. <i>Nanoscience and Technology</i> , 2015 , 65-101	0.6	8
21	Thin-walled SnO ₂ nanotubes functionalized with Pt and Au catalysts via the protein templating route and their selective detection of acetone and hydrogen sulfide molecules. <i>Nanoscale</i> , 2015 , 7, 16417-26	7.7	116
20	. <i>Journal of Microelectromechanical Systems</i> , 2015 , 24, 1545-1556	2.5	4
19	Exhaled Breath Sensors. <i>KAIST Research Series</i> , 2015 , 19-49		20

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17	Facile synthesis of hierarchical porous WO ₃ nanofibers having 1D nanoneedles and their functionalization with non-oxidized graphene flakes for selective detection of acetone molecules. <i>RSC Advances</i> , 2015 , 5, 7584-7588	3.7	41
16	Highly sensitive and selective hydrogen sulfide and toluene sensors using Pd functionalized WO ₃ nanofibers for potential diagnosis of halitosis and lung cancer. <i>Sensors and Actuators B: Chemical</i> , 2014 , 193, 574-581	8.5	169
15	The stability, sensitivity and response transients of ZnO, SnO ₂ and WO ₃ sensors under acetone, toluene and H ₂ S environments. <i>Sensors and Actuators B: Chemical</i> , 2014 , 197, 300-307	8.5	93
14	Electrospun Functional Nanofibers and Their Applications in Chemical Sensors and Li-Ion Batteries 2014 , 793-838		2
13	Selective detection of acetone and hydrogen sulfide for the diagnosis of diabetes and halitosis using SnO(2) nanofibers functionalized with reduced graphene oxide nanosheets. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 2588-97	9.5	284
12	Bi-functional co-sensitization of graphene oxide sheets and Ir nanoparticles on p-type CoO nanofibers for selective acetone detection. <i>Journal of Materials Chemistry B</i> , 2014 , 2, 7160-7167	7.3	61
11	Facile Au catalyst loading on the inner shell of hollow SnO ₂ spheres using Au-decorated block copolymer sphere templates and their selective H ₂ S sensing characteristics. <i>Nanoscale</i> , 2014 , 6, 11898-903	7.7	62
10	Fast responding exhaled-breath sensors using WO ₃ hemitubes functionalized by graphene-based electronic sensitizers for diagnosis of diseases. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 9061-70	9.5	141
9	Selectivity enhancement of SnO ₂ nanofiber gas sensors by functionalization with Pt nanocatalysts and manipulation of the operation temperature. <i>Sensors and Actuators B: Chemical</i> , 2013 , 188, 156-168	8.5	84
8	High throughput ultralong (20 cm) nanowire fabrication using a wafer-scale nanograting template. <i>Nano Letters</i> , 2013 , 13, 3978-84	11.5	33
7	Sensors: Thin-Wall Assembled SnO ₂ Fibers Functionalized by Catalytic Pt Nanoparticles and their Superior Exhaled-Breath-Sensing Properties for the Diagnosis of Diabetes (Adv. Funct. Mater. 19/2013). <i>Advanced Functional Materials</i> , 2013 , 23, 2342-2342	15.6	6
6	Selective diagnosis of diabetes using Pt-functionalized WO ₃ hemitube networks as a sensing layer of acetone in exhaled breath. <i>Analytical Chemistry</i> , 2013 , 85, 1792-6	7.8	236
5	Thin-Wall Assembled SnO ₂ Fibers Functionalized by Catalytic Pt Nanoparticles and their Superior Exhaled-Breath-Sensing Properties for the Diagnosis of Diabetes. <i>Advanced Functional Materials</i> , 2013 , 23, 2357-2367	15.6	276
4	Facile Synthesis of p-type Perovskite SrTi _{0.65} Fe _{0.35} O ₃ Nanofibers Prepared by Electrospinning and Their Oxygen-Sensing Properties. <i>Macromolecular Materials and Engineering</i> , 2013 , 298, 521-527	3.9	21
3	Exhaled VOCs sensing properties of WO ₃ nanofibers functionalized by Pt and IrO ₂ nanoparticles for diagnosis of diabetes and halitosis. <i>Journal of Electroceramics</i> , 2012 , 29, 106-116	1.5	64
2	Use of a columnar metal thin film as a nanosieve with sub-10 nm pores. <i>Advanced Materials</i> , 2012 , 24, 4408-13	24	19
1	MEMS variable capacitor with superior linearity and large tuning ratio by moving the plate to the increasing-gap direction 2011 ,		4

