

# Udo Weimar

## List of Publications by Year in descending order

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39  
papers

3,542  
citations

430874

18  
h-index

361022

35  
g-index

42  
all docs

42  
docs citations

42  
times ranked

3776  
citing authors

#	ARTICLE	IF	CITATIONS
1	Conduction Model of Metal Oxide Gas Sensors. , 2001, 7, 143-167.		2,216
2	Current Understanding of the Fundamental Mechanisms of Doped and Loaded Semiconducting Metal-Oxide-Based Gas Sensing Materials. ACS Sensors, 2019, 4, 2228-2249.	7.8	284
3	Neodymium Dioxide Carbonate as a Sensing Layer for Chemoresistive CO <sub>2</sub> Sensing. Chemistry of Materials, 2009, 21, 5375-5381.	6.7	88
4	Platinum loaded tin dioxide: a model system for unravelling the interplay between heterogeneous catalysis and gas sensing. Journal of Materials Chemistry A, 2018, 6, 2034-2046.	10.3	88
5	Understanding the Potential of WO <sub>3</sub> Based Sensors for Breath Analysis. Sensors, 2016, 16, 1815.	3.8	83
6	Ambient Humidity Influence on CO Detection with SnO <sub>2</sub> Gas Sensing Materials. A Combined DRIFTS/DFT Investigation. Journal of Physical Chemistry C, 2017, 121, 25064-25073.	3.1	82
7	WO <sub>3</sub> -Based Gas Sensors: Identifying Inherent Qualities and Understanding the Sensing Mechanism. ACS Sensors, 2020, 5, 1624-1633.	7.8	82
8	Modular Sensor Systems for Gas Sensing and Odor Monitoring: The MOSES Concept. Accounts of Chemical Research, 1998, 31, 307-315.	15.6	69
9	Structure and chemistry of surface-doped Pt:SnO <sub>2</sub> gas sensing materials. RSC Advances, 2016, 6, 28149-28155.	3.6	47
10	Nanolevel Control of Gas Sensing Characteristics via Heterojunction between Rh <sub>2</sub> O <sub>3</sub> Clusters and WO <sub>3</sub> Crystallites. Journal of Physical Chemistry C, 2017, 121, 24701-24706.	3.1	44
11	Nondestructive assessment of the grain size distribution of SnO <sub>2</sub> nanoparticles by low-frequency Raman spectroscopy. Applied Physics Letters, 1997, 71, 1957-1959.	3.3	34
12	Effects of Gas Adsorption Properties of an Au-Loaded Porous In <sub>2</sub> O <sub>3</sub> Sensor on NO <sub>2</sub> -Sensing Properties. ACS Sensors, 2021, 6, 4019-4028.	7.8	33
13	Investigations on the Temperature-Dependent Interaction of Water Vapor with Tin Dioxide and Its Implications on Gas Sensing. ACS Sensors, 2020, 5, 3207-3216.	7.8	30
14	Rhodium Oxide Surface-Loaded Gas Sensors. Nanomaterials, 2018, 8, 892.	4.1	25
15	Dominant Role of Heterojunctions in Gas Sensing with Composite Materials. ACS Applied Materials & Interfaces, 2020, 12, 21127-21132.	8.0	24
16	Gas sensors based on mass-sensitive transducers part 1: transducers and receptors basic understanding. Analytical and Bioanalytical Chemistry, 2019, 411, 1761-1787.	3.7	21
17	Chemoresistive CO <sub>2</sub> Gas Sensors Based On La <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> : Sensing Mechanism Insights Provided by Operando Characterization. ACS Sensors, 2020, 5, 2555-2562.	7.8	21
18	Enhanced NO <sub>2</sub> -Sensing Properties of Au-Loaded Porous In <sub>2</sub> O <sub>3</sub> Gas Sensors at Low Operating Temperatures. Chemosensors, 2020, 8, 72.	3.6	19

#	ARTICLE	IF	CITATIONS
19	Conductance Model for Single-Crystalline/Compact Metal Oxide Gas-Sensing Layers in the Nondegenerate Limit: Example of Epitaxial SnO <sub>2</sub> (101). ACS Sensors, 2019, 4, 2420-2428.	7.8	17
20	Synthesis of poly-[2,5-di(thiophen-2-yl)-1H-pyrrole] derivatives and the effects of the substituents on their properties. Synthetic Metals, 2014, 196, 158-165.	3.9	16
21	Operando Investigation of the Aging Mechanism of Lead Sulfide Colloidal Quantum Dots in an Oxidizing Background. Journal of Physical Chemistry C, 2021, 125, 19847-19857.	3.1	14
22	Response of Gallium Nitride Chemiresistors to Carbon Monoxide is Due to Oxygen Contamination. ACS Sensors, 2017, 2, 713-717.	7.8	13
23	Operando Investigations of Differently Prepared In <sub>2</sub> O <sub>3</sub> -Gas Sensors. Proceedings (mdpi), 2017, 1, .	0.2	12
24	Thermal Water Splitting on the WO <sub>3</sub> Surface: Experimental Proof. ACS Applied Electronic Materials, 2020, 2, 3254-3262.	4.3	12
25	Reversible intercalation of volatile amines into stacks of soluble phthalocyanines. Journal of Materials Chemistry, 2002, 12, 2305-2311.	6.7	10
26	Direct Microscopic Proof of the Fermi Level Pinning Gas-Sensing Mechanism: The Case of Platinum-Loaded WO <sub>3</sub> . Journal of Physical Chemistry Letters, 2020, 11, 166-171.	4.6	10
27	WO <sub>3</sub> Based Gas Sensors. Proceedings (mdpi), 2019, 2, .	0.2	9
28	The Role of Different Lanthanoid and Transition Metals in Perovskite Gas Sensors. Sensors, 2021, 21, 8462.	3.8	8
29	Flame spray synthesis of tin oxide nanoparticles for gas sensing. Materials Research Society Symposia Proceedings, 2004, 828, 43.	0.1	5
30	Gas sensors based on mass-sensitive transducers. Part 2: Improving the sensors towards practical application. Analytical and Bioanalytical Chemistry, 2020, 412, 6707-6776.	3.7	5
31	Operando Investigations of Rare-Earth Oxycarbonate CO <sub>2</sub> Sensors. Proceedings (mdpi), 2018, 2, 801.	0.2	4
32	Understanding the Sensing Mechanism of WO <sub>3</sub> based Gas Sensors. , 2019, , .		3
33	Overheat diagnosis of power cable based on gas sensors: Device/material exploration. Sensors and Actuators B: Chemical, 2022, 350, 130837.	7.8	3
34	Understanding the Sensing Mechanism of Rh <sub>2</sub> O <sub>3</sub> loaded In <sub>2</sub> O <sub>3</sub> . Proceedings (mdpi), 2018, 2, .	0.2	2
35	Investigation of the Film Thickness Influence on the Sensor Response of In <sub>2</sub> O <sub>3</sub> -Based Sensors for O <sub>3</sub> Detection at Low Temperature and Operando DRIFT Study. Proceedings (mdpi), 2019, 14, .	0.2	2
36	Proof of Concept for Operando Infrared Spectroscopy Investigation of Light-Excited Metal Oxide-Based Gas Sensors. Journal of Physical Chemistry Letters, 2022, 13, 3631-3635.	4.6	2

#	ARTICLE	IF	CITATIONS
37	Regression Model for the Prediction of Pollutant Gas Concentrations with Temperature Modulated Gas Sensors. , 2022, , .		2
38	Optimization of SMOX-materials for gas sensing applications by numerical simulations. , 2017, , .		1
39	Gas Sensing Mechanism Investigation of LaFeO <sub>3</sub> Perovskite-Type Oxides via Operando Technique. Proceedings (mdpi), 2019, 14, .	0.2	0