Udo Weimar

List of Publications by Year
in descending order

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	Overheat diagnosis of power cable based on gas sensors: Device/material exploration. Sensors and Actuators B: Chemical, 2022, 350, 130837.	7.8	3
2	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
3	Regression Model for the Prediction of Pollutant Gas Concentrations with Temperature Modulated Gas Sensors. , 2022, , .		2
4	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
5	Effects of Gas Adsorption Properties of an Au-Loaded Porous In₂O₃ Sensor on NO₂-Sensing Properties. ACS Sensors, 2021, 6, 4019-4028.	7.8	33
6	The Role of Different Lanthanoid and Transition Metals in Perovskite Gas Sensors. Sensors, 2021, 21, 8462.	3.8	8
7	Direct Microscopic Proof of the Fermi Level Pinning Gas-Sensing Mechanism: The Case of Platinum-Loaded WO₃. Journal of Physical Chemistry Letters, 2020, 11, 166-171.	4.6	10
8	Chemoresistive CO₂ Gas Sensors Based On La₂O₂CO₃: Sensing Mechanism Insights Provided by Operando Characterization. ACS Sensors, 2020, 5, 2555-2562.	7.8	21
9	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
10	Thermal Water Splitting on the WO₃ Surface: Experimental Proof. ACS Applied Electronic Materials, 2020, 2, 3254-3262.	4.3	12
11	Enhanced NO2-Sensing Properties of Au-Loaded Porous In2O3 Gas Sensors at Low Operating Temperatures. Chemosensors, 2020, 8, 72.	3.6	19
12	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
13	Dominant Role of Heterojunctions in Gas Sensing with Composite Materials. ACS Applied Materials & Interfaces, 2020, 12, 21127-21132.	8.0	24
14	WO₃-Based Gas Sensors: Identifying Inherent Qualities and Understanding the Sensing Mechanism. ACS Sensors, 2020, 5, 1624-1633.	7.8	82
15	WO3 Based Gas Sensors. Proceedings (mdpi), 2019, 2, .	0.2	9
16	Conductance Model for Single-Crystalline/Compact Metal Oxide Gas-Sensing Layers in the Nondegenerate Limit: Example of Epitaxial SnO₂(101). ACS Sensors, 2019, 4, 2420-2428.	7.8	17
17	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
18	Gas Sensing Mechanism Investigation of LaFeO3 Perovskite-Type Oxides via Operando Technique. Proceedings (mdpi), 2019, 14, .	0.2	0

#	Article	IF	Citations
19	Understanding the Sensing Mechanism of WO₃ based Gas Sensors. , 2019, , .		3
20	Investigation of the Film Thickness Influence on the Sensor Response of In2O3-Based Sensors for O3 Detection at Low Temperature and Operando DRIFT Study. Proceedings (mdpi), 2019, 14, .	0.2	2
21	Gas sensors based on mass-sensitive transducers part 1: transducers and receptorsâ€”basic understanding. Analytical and Bioanalytical Chemistry, 2019, 411, 1761-1787.	3.7	21
22	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
23	Operando Investigations of Rare-Earth Oxycarbonate CO2 Sensors. Proceedings (mdpi), 2018, 2, 801.	0.2	4
24	Rhodium Oxide Surface-Loaded Gas Sensors. Nanomaterials, 2018, 8, 892.	4.1	25
25	Understanding the Sensing Mechanism of Rh2O3 loaded In2O3. Proceedings (mdpi), 2018, 2, .	0.2	2
26	Response of Gallium Nitride Chemiresistors to Carbon Monoxide is Due to Oxygen Contamination. ACS Sensors, 2017, 2, 713-717.	7.8	13
27	Ambient Humidity Influence on CO Detection with SnO₂ Gas Sensing Materials. A Combined DRIFTS/DFT Investigation. Journal of Physical Chemistry C, 2017, 121, 25064-25073.	3.1	82
28	Nanolevel Control of Gas Sensing Characteristics via pâ€“n Heterojunction between Rh₂O₃ Clusters and WO₃ Crystallites. Journal of Physical Chemistry C, 2017, 121, 24701-24706.	3.1	44
29	Operando Investigations of Differently Prepared In2O3-Gas Sensors. Proceedings (mdpi), 2017, 1, .	0.2	12
30	Optimization of SMOX-materials for gas sensing applications by numerical simulations. , 2017, , .		1
31	Understanding the Potential of WO3 Based Sensors for Breath Analysis. Sensors, 2016, 16, 1815.	3.8	83
32	Structure and chemistry of surface-doped Pt:SnO₂ gas sensing materials. RSC Advances, 2016, 6, 28149-28155.	3.6	47
33	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
34	Neodymium Dioxide Carbonate as a Sensing Layer for Chemoresistive CO₂ Sensing. Chemistry of Materials, 2009, 21, 5375-5381.	6.7	88
35	Flame spray synthesis of tin oxide nanoparticles for gas sensing. Materials Research Society Symposia Proceedings, 2004, 828, 43.	0.1	5
36	Reversible intercalation of volatile amines into stacks of soluble phthalocyanines. Journal of Materials Chemistry, 2002, 12, 2305-2311.	6.7	10

#	Article	IF	Citations
37	Conduction Model of Metal Oxide Gas Sensors. , 2001, 7, 143-167.		2,216
38	Modular Sensor Systems for Gas Sensing and Odor Monitoring:â€‰ The MOSES Concept. Accounts of Chemical Research, 1998, 31, 307-315.	15.6	69
39	Nondestructive assessment of the grain size distribution of SnO2 nanoparticles by low-frequency Raman spectroscopy. Applied Physics Letters, 1997, 71, 1957-1959.	3.3	34