Michael Breedon

List of Publications by Year
in descending order

62 papers	2,262 citations	331670 21 h-index	214800 47 g-index
64 all docs	64 docs citations	64 times ranked	3065 citing authors

#	Article	IF	Citations
1	Towards higher electrochemical stability of electrolytes: lithium salt design through <i>in silico</i> screening. Journal of Materials Chemistry A, 2022, 10, 13254-13265.	10.3	4
2	The interaction of several fluorinated ionic liquids on the LiF(001) surface. Surfaces and Interfaces, 2021, 22, 100836.	3.0	3
3	The (Inâ€)Stability of the Ionic Liquids [(TMEDA)BH₂][TFSI] and âˆ’[FSI] on the Li(001) Surface. Batteries and Supercaps, 2021, 4, 1126-1134.	4.7	5
4	Spectroscopic and Computational Study of Boronium Ionic Liquids and Electrolytes. Chemistry - A European Journal, 2021, 27, 12826-12834.	3.3	7
5	Fluorinated Boron-Based Anions for Higher Voltage Li Metal Battery Electrolytes. Nanomaterials, 2021, 11, 2391.	4.1	4
6	Towards materials discovery: assays for screening and study of chemical interactions of novel corrosion inhibitors in solution and coatings. New Journal of Chemistry, 2020, 44, 7647-7658.	2.8	14
7	Stability of Boronium Cation-Based Ionic Liquid Electrolytes on the Li Metal Anode Surface. ACS Applied Energy Materials, 2020, 3, 5497-5509.	5.1	24
8	Evaluation of novel Griess-reagent candidates for nitrite sensing in aqueous media identified <i>via</i> molecular fingerprint searching. RSC Advances, 2019, 9, 3994-4000.	3.6	11
9	The interaction of ethylammonium tetrafluoroborate [EtNH₃⁺][BF₄^{âˆ’}] ionic liquid on the Li(001) surface: towards understanding early SEI formation on Li metal. Physical Chemistry Chemical Physics, 2019, 21, 10028-10037.	2.8	20
10	Developing High-Throughput Assays for Screening and Studying Chemical Interactions of Novel Corrosion Inhibitors in Solution and Coatings. ECS Meeting Abstracts, 2019, , .	0.0	0
11	Developing High-Throughput Assays for Screening and Studying Chemical Interactions of Novel Corrosion Inhibitors in Solution and Coatings. ECS Meeting Abstracts, 2019, , .	0.0	0
12	Faster High Throughput Electrochemical Testing for Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
13	Understanding the Link between Anion Structure and Lithium Coordination. ECS Meeting Abstracts, 2019, , .	0.0	0
14	Surface Reactions of Ethylene Carbonate and Propylene Carbonate on the Li(001) Surface. Electrochimica Acta, 2017, 243, 320-330.	5.2	26
15	A microclimate model to simulate neutral salt spray testing for corrosion inhibitor evaluation and functional coating development. Progress in Organic Coatings, 2017, 111, 327-335.	3.9	10
16	Modeling corrosion inhibition efficacy of small organic molecules as non-toxic chromate alternatives using comparative molecular surface analysis (CoMSA). Chemosphere, 2016, 160, 80-88.	8.2	14
17	Correlation between molecular features and electrochemical properties using an artificial neural network. Materials and Design, 2016, 112, 410-418.	7.0	29
18	Using high throughput experimental data and in silico models to discover alternatives to toxic chromate corrosion inhibitors. Corrosion Science, 2016, 106, 229-235.	6.6	101

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19	The adsorption of NO on YSZ(111) and oxygen-enriched YSZ(111) surfaces. Chemical Physics Letters, 2014, 593, 61-68.	2.6	3
20	Molecular ionization and deprotonation energies as indicators of functional coating performance. Journal of Materials Chemistry A, 2014, 2, 16660-16668.	10.3	18
21	Towards chromate-free corrosion inhibitors: structureâ€“property models for organic alternatives. Green Chemistry, 2014, 16, 3349-3357.	9.0	132
22	Sensing characteristics of aged zirconia-based hydrogen sensor utilizing Znâ€“Ta-based oxide sensing-electrode. Electrochemistry Communications, 2013, 31, 133-136.	4.7	18
23	Znâ€“Ta-based oxide as a hydrogen sensitive electrode material for zirconia-based electrochemical gas sensors. Sensors and Actuators B: Chemical, 2013, 187, 58-64.	7.8	14
24	Reduction in Ethanol Interference of Zirconia-Based Sensor for Selective Detection of Volatile Organic Compounds. Journal of the Electrochemical Society, 2013, 160, B146-B151.	2.9	9
25	Augmenting H2 sensing performance of YSZ-based electrochemical gas sensors via the application of Au mesh and YSZ coating. Sensors and Actuators B: Chemical, 2013, 182, 40-44.	7.8	37
26	Adsorption of NO₂ on YSZ(111) and Oxygen-Enriched YSZ(111) Surfaces. Journal of Physical Chemistry C, 2013, 117, 12472-12482.	3.1	9
27	Stabilized zirconia-based sensor utilizing SnO2-based sensing electrode with an integrated Cr2O3 catalyst layer for sensitive and selective detection of hydrogen. International Journal of Hydrogen Energy, 2013, 38, 305-312.	7.1	31
28	Insight into the Aging Effect on Enhancement of Hydrogen-Sensing Characteristics of a Zirconia-Based Sensor Utilizing a Znâ€“Taâ€“O-Based Sensing Electrode. ACS Applied Materials & Interfaces, 2013, 5, 12099-12106.	8.0	20
29	Effect of Sintering Temperature on Hydrogen Sensing Characteristics of Zirconia Sensor Utilizing Zn-Ta-O-Based Sensing Electrode. Journal of the Electrochemical Society, 2013, 160, B164-B169.	2.9	11
30	Potentiometric YSZ-Based Sensors Using Zn-Ta-O-Based Sensing Electrode for Selective H2 Detection. ECS Transactions, 2013, 50, 179-187.	0.5	2
31	Improvement of Toluene Selectivity via the Application of an Ethanol Oxidizing Catalytic Cell Upstream of a YSZ-Based Sensor for Air Monitoring Applications. Sensors, 2012, 12, 4706-4714.	3.8	17
32	Fe-based Solid Reference Electrode Utilized in YSZ-Based Oxygen Sensor. ECS Electrochemistry Letters, 2012, 2, B1-B3.	1.9	3
33	Working Mechanism of Novel Mn-Based Reference Electrode for Solid-State Electrochemical Gas Sensors. Journal of the Electrochemical Society, 2012, 159, B801-B810.	2.9	5
34	Construction of Sensitive and Selective Zirconia-Based CO Sensors Using ZnCr₂O₄-Based Sensing Electrodes. Langmuir, 2012, 28, 1638-1645.	3.5	36
35	Sensing behavior of YSZ-based amperometric NO2 sensors consisting of Mn-based reference-electrode and In2O3 sensing-electrode. Talanta, 2012, 88, 318-323.	5.5	27
36	C3H6 sensing characteristics of rod-type yttria-stabilized zirconia-based sensor for ppb level environmental monitoring applications. Electrochimica Acta, 2012, 73, 118-122.	5.2	18

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37	Selective hydrogen detection at high temperature by using yttria-stabilized zirconia-based sensor with coupled metal-oxide-based sensing electrodes. Electrochimica Acta, 2012, 76, 152-158.	5.2	21
38	Influence of thickness of sub-micron Cu2O-doped RuO2 electrode on sensing performance of planar electrochemical pH sensors. Materials Letters, 2012, 75, 165-168.	2.6	26
39	The synthesis and gas sensitivity of CuO micro-dimensional structures featuring a stepped morphology. Materials Letters, 2012, 82, 51-53.	2.6	14
40	In situ Raman spectroscopy of H2 interaction with WO3 films. Physical Chemistry Chemical Physics, 2011, 13, 7330.	2.8	77
41	The correlation between electric field emission phenomenon and Schottky contact reverse bias characteristics in nanostructured systems. Journal of Applied Physics, 2011, 109, 114316.	2.5	7
42	Stabilized zirconia-based planar sensor using coupled oxide(+Au) electrodes for highly selective CO detection. Sensors and Actuators B: Chemical, 2011, 160, 1273-1281.	7.8	34
43	Compact YSZ-Rod-Based Hydrocarbon Sensor Utilizing Metal-Oxide Sensing-Electrode and Mn-Based Reference-Electrode Combination. Electrochemical and Solid-State Letters, 2011, 14, J23.	2.2	12
44	A Hydrogen Gas Sensor Based on Pt/Nanostructured WO3/SiC Schottky Diode. Sensor Letters, 2011, 9, 11-15.	0.4	19
45	Gas Sensing Properties of Interconnected ZnO Nanowires. Sensor Letters, 2011, 9, 929-935.	0.4	10
46	Aqueous synthesis of interconnected ZnO nanowires using spray pyrolysis deposited seed layers. Materials Letters, 2010, 64, 291-294.	2.6	91
47	Synthesis of Nanostructured Tungsten Oxide Thin Films: A Simple, Controllable, Inexpensive, Aqueous Solâ˘Gel Method. Crystal Growth and Design, 2010, 10, 430-439.	3.0	164
48	Adsorption of NO₂ on Oxygen Deficient ZnO(21ì...1ì...0) for Gas Sensing Applications: A DFT Study. Journal of Physical Chemistry C, 2010, 114, 16603-16610.	3.1	67
49	Synthesis of Atomically Thin WO₃ Sheets from Hydrated Tungsten Trioxide. Chemistry of Materials, 2010, 22, 5660-5666.	6.7	215
50	Seeded growth of ZnO nanorods from NaOH solutions. Materials Letters, 2009, 63, 249-251.	2.6	15
51	Absorption spectral response of nanotextured WO3 thin films with Pt catalyst towards H2. Sensors and Actuators B: Chemical, 2009, 137, 115-120.	7.8	147
52	Adsorption of NO and NO2 on the ZnO() surface: A DFT study. Surface Science, 2009, 603, 3389-3399.	1.9	49
53	ZnO nanostructures grown on epitaxial GaN. Thin Solid Films, 2009, 518, 1053-1056.	1.8	3
54	A comparison of forward and reverse bias operation in a Pt/nanostructured ZnO Schottky diode based hydrogen sensor. Procedia Chemistry, 2009, 1, 979-982.	0.7	13

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55	Graphene-like nano-sheets for surface acoustic wave gas sensor applications. Chemical Physics Letters, 2009, 467, 344-347.	2.6	354
56	Fast formation of thick and transparent titania nanotubular films from sputtered Ti. Electrochemistry Communications, 2009, 11, 1308-1311.	4.7	40
57	High-Temperature Anodized WO₃ Nanoplatelet Films for Photosensitive Devices. Langmuir, 2009, 25, 9545-9551.	3.5	111
58	Adsorption of atomic nitrogen and oxygen on mathrm {ZnO(2ar {1} ar {1}0)} surface: a density functional theory study. Journal of Physics Condensed Matter, 2009, 21, 144208.	1.8	13
59	UV-induced wettability change of teflon-modified ZnO nanorod arrays on LiNbO<inf>3</inf> substrate. , 2008, , .		0
60	Electrowetting of Superhydrophobic ZnO Nanorods. Langmuir, 2008, 24, 5091-5098.	3.5	75
61	ZnO nanostructured arrays grown from aqueous solutions on different substrates. , 2008, , .		3
62	Superhydrophobic and superhydrophilic surfaces with MoO x sub micron structures. , 2007, , .		0