

Miran Gaberscek

List of Publications by Year in descending order

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times ranked

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citing authors

#	ARTICLE	IF	CITATIONS
1	The Pitfalls and Opportunities of Impedance Spectroscopy of Lithium Sulfur Batteries. <i>Advanced Materials Interfaces</i> , 2022, 9, 2101116.	3.7	13
2	Impedance spectroscopy of battery cells: Theory versus experiment. <i>Current Opinion in Electrochemistry</i> , 2022, 32, 100917.	4.8	17
3	Suppressing Platinum Electrocatalyst Degradation via a High-Surface-Area Organic Matrix Support. <i>ACS Omega</i> , 2022, 7, 3540-3548.	3.5	6
4	Transmission Line Model Impedance Analysis of Lithium Sulfur Batteries: Influence of Lithium Sulfide Deposit Formed During Discharge and Self-Discharge. <i>Journal of the Electrochemical Society</i> , 2022, 169, 010529.	2.9	4
5	Deconvoluting the benefits of porosity distribution in layered electrodes on the electrochemical performance of Li-ion batteries. <i>Energy Storage Materials</i> , 2022, 47, 462-471.	18.0	32
6	Toward a Unified Description of Battery Data. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	33
7	Importance of Chemical Activation and the Effect of Low Operation Voltage on the Performance of Pt-Alloy Fuel Cell Electrocatalysts. <i>ACS Applied Energy Materials</i> , 2022, 5, 8862-8877.	5.1	15
8	Enhanced Photocatalytic Hydrogen Evolution from Water Splitting on Ta ₂ O ₅ /SrZrO ₃ Heterostructures Decorated with Cu _x O/RuO ₂ Cocatalysts. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 31767-31781.	8.0	15
9	Electrochemical Stability and Degradation Mechanisms of Commercial Carbon-Supported Gold Nanoparticles in Acidic Media. <i>Journal of Physical Chemistry C</i> , 2021, 125, 635-647.	3.1	18
10	Magnesium Polysulfides: Synthesis, Disproportionation, and Impedance Response in Symmetrical Carbon Electrode Cells. <i>ChemElectroChem</i> , 2021, 8, 1062-1069.	3.4	7
11	Transmission line models for evaluation of impedance response of insertion battery electrodes and cells. <i>Journal of Power Sources Advances</i> , 2021, 7, 100047.	5.1	42
12	Derivation of Transmission Line Model from the Concentrated Solution Theory (CST) for Porous Electrodes. <i>Journal of the Electrochemical Society</i> , 2021, 168, 070543.	2.9	11
13	TiO ₂ photocatalyst with single and dual noble metal co-catalysts for efficient water splitting and organic compound removal. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 32871-32881.	7.1	20
14	Fast Impedance Measurement of Li-Ion Battery Using Discrete Random Binary Excitation and Wavelet Transform. <i>IEEE Access</i> , 2021, 9, 46152-46165.	4.2	14
15	Time-resolved in situ electrochemical atomic force microscopy imaging of the corrosion dynamics of AA2024-T3 using a new design of cell. <i>Journal of Materials Research</i> , 2021, 36, 79-93.	2.6	8
16	Resolving the Dilemma of Fe-N-C Catalysts by the Selective Synthesis of Tetrapyrrolic Active Sites via an Imprinting Strategy. <i>Journal of the American Chemical Society</i> , 2021, 143, 18010-18019.	13.7	68
17	The Influence Catalyst Layer Thickness on Resistance Contributions of PEMFC Determined by Electrochemical Impedance Spectroscopy. <i>Energies</i> , 2021, 14, 7299.	3.1	9
18	Time-resolved in situ electrochemical atomic force microscopy imaging of the corrosion dynamics of AA2024-T3 using a new design of cell. <i>Journal of Materials Research</i> , 2021, 36, 1-15.	2.6	0

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19	Toward the Continuous Production of Multigram Quantities of Highly Uniform Supported Metallic Nanoparticles and Their Application for Synthesis of Superior Intermetallic Pt-Alloy ORR Electrocatalysts. <i>ACS Applied Energy Materials</i> , 2021, 4, 13819-13829.	5.1	21
20	Understanding Li-based battery materials via electrochemical impedance spectroscopy. <i>Nature Communications</i> , 2021, 12, 6513.	12.8	151
21	Nanomaterial aspects of Li-ion battery cathodes. <i>Frontiers of Nanoscience</i> , 2021, 19, 29-54.	0.6	2
22	Application of electrochemical impedance spectroscopy to commercial Li-ion cells: A review. <i>Journal of Power Sources</i> , 2020, 480, 228742.	7.8	334
23	Advances in understanding Li battery mechanisms using impedance spectroscopy - Review. <i>Journal of Electrochemical Science and Engineering</i> , 2020, 10, 79-93.	3.5	11
24	Increasing the Oxygen-Evolution Reaction Performance of Nanotubular Titanium Oxynitride-Supported Ir Nanoparticles by a Strong Metal-Support Interaction. <i>ACS Catalysis</i> , 2020, 10, 13688-13700.	11.2	54
25	Electrochemical Kinetics Study of Interaction Between Li Metal and Polysulfides. <i>Journal of the Electrochemical Society</i> , 2020, 167, 080526.	2.9	8
26	The Importance of Temperature and Potential Window in Stability Evaluation of Supported Pt-Based Oxygen Reduction Reaction Electrocatalysts in Thin Film Rotating Disc Electrode Setup. <i>Journal of the Electrochemical Society</i> , 2020, 167, 114506.	2.9	22
27	Effect of high concentration of polysulfides on Li stripping and deposition. <i>Electrochimica Acta</i> , 2020, 354, 136696.	5.2	15
28	Ir/TiON _x /C high-performance oxygen evolution reaction nanocomposite electrocatalysts in acidic media: synthesis, characterization and electrochemical benchmarking protocol. <i>JPhys Energy</i> , 2020, 2, 02LT01.	5.3	11
29	A Powerful Transmission Line Model for Analysis of Impedance of Insertion Battery Cells: A Case Study on the NMC-Li System. <i>Journal of the Electrochemical Society</i> , 2020, 167, 140539.	2.9	38
30	Modified Floating Electrode Apparatus for Advanced Characterization of Oxygen Reduction Reaction Electrocatalysts. <i>Journal of the Electrochemical Society</i> , 2020, 167, 166501.	2.9	25
31	From Zn-N-C to Fe-N-C: Active-Site Imprinting As a New Method for the Synthesis of Highly Active PGM-Free Catalysts for PEMFC. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 2271-2271.	0.0	0
32	Methodology for Investigating Electrochemical Gas Evolution Reactions: Floating Electrode as a Means for Effective Gas Bubble Removal. <i>Analytical Chemistry</i> , 2019, 91, 10353-10356.	6.5	22
33	Insights into thermal annealing of highly-active PtCu ₃ /C Oxygen Reduction Reaction electrocatalyst: An in-situ heating transmission Electron microscopy study. <i>Nano Energy</i> , 2019, 63, 103892.	16.0	41
34	An Inverted Sandwich Electrochromic Device Architecture Does Not Require Optically Transparent Electrodes. <i>Advanced Materials Technologies</i> , 2019, 4, 1900389.	5.8	9
35	Insight on Single Cell Proton Exchange Membrane Fuel Cell Performance of Pt-Cu/C Cathode. <i>Catalysts</i> , 2019, 9, 544.	3.5	14
36	Towards Stable and Conductive Titanium Oxynitride High-Surface-Area Support for Iridium Nanoparticles as Oxygen Evolution Reaction Electrocatalyst. <i>ChemCatChem</i> , 2019, 11, 5038-5044.	3.7	29

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37	Which Process Limits the Operation of a Li-S System?. Chemistry of Materials, 2019, 31, 9012-9023.	6.7	56
38	Synthesis and Advanced Electrochemical Characterization of Multifunctional Electrocatalytic Composite for Unitized Regenerative Fuel Cell. ACS Catalysis, 2019, 9, 11468-11483.	11.2	21
39	Towards Stable and Conductive Titanium Oxynitride High-Surface-Area Support for Iridium Nanoparticles as Oxygen Evolution Reaction Electrocatalyst. ChemCatChem, 2019, 11, 4982-4982.	3.7	0
40	Transmission Line Model for Description of the Impedance Response of Li Electrodes with Dendritic Growth. Journal of Physical Chemistry C, 2019, 123, 27997-28007.	3.1	46
41	Active-Site Imprinting: Preparation of Fe-N-C Catalysts from Zinc Ion-Templated Ionothermal Nitrogen-Doped Carbons. Advanced Energy Materials, 2019, 9, 1902412.	19.5	59
42	Nanoparticles and Single Atoms in Commercial Carbon-Supported Platinum-Group Metal Catalysts. Catalysts, 2019, 9, 134.	3.5	28
43	A Double-Passivation Water-Based Galvanic Displacement Method for Reproducible Gram-Scale Production of High-Performance Platinum-Alloy Electrocatalysts. Angewandte Chemie, 2019, 131, 13400-13404.	2.0	17
44	A Double-Passivation Water-Based Galvanic Displacement Method for Reproducible Gram-Scale Production of High-Performance Platinum-Alloy Electrocatalysts. Angewandte Chemie - International Edition, 2019, 58, 13266-13270.	13.8	29
45	Effect of silsesquioxane addition on the protective performance of fluoropolymer coatings for bronze surfaces. Materials and Design, 2019, 178, 107860.	7.0	19
46	Electrochemical Impedance Spectroscopy Study of Waterborne Epoxy Coating Film Formation. Coatings, 2019, 9, 254.	2.6	6
47	Comparison of Pt-Cu/C with Benchmark Pt-Co/C: Metal Dissolution and Their Surface Interactions. ACS Applied Energy Materials, 2019, 2, 3131-3141.	5.1	54
48	Atomically Resolved Anisotropic Electrochemical Shaping of Nano-electrocatalyst. Nano Letters, 2019, 19, 4919-4927.	9.1	33
49	Boosting Rechargeable Batteries R&D by Multiscale Modeling: Myth or Reality?. Chemical Reviews, 2019, 119, 4569-4627.	47.7	204
50	CO-assisted ex-situ chemical activation of Pt-Cu/C oxygen reduction reaction electrocatalyst. Electrochimica Acta, 2019, 306, 377-386.	5.2	37
51	Impedance response of porous carbon cathodes in polysulfide redox system. Electrochimica Acta, 2019, 302, 169-179.	5.2	39
52	A Transmission Line Model of Electrochemical Cell's Impedance: Case Study on a Li-S System. Journal of the Electrochemical Society, 2019, 166, A5045-A5053.	2.9	33
53	Revealing the Thermodynamic Background of the Memory Effect in Phase Separating Cathode Materials. Strojniški Vestnik/Journal of Mechanical Engineering, 2019, 65, 690-700.	1.1	2
54	Diketopyrrolopyrrole pigment core@multi-layer SiO ₂ shell with improved photochemical stability. Dyes and Pigments, 2018, 156, 108-115.	3.7	5

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55	Platinum Dissolution and Redeposition from Pt/C Fuel Cell Electrocatalyst at Potential Cycling. <i>Journal of the Electrochemical Society</i> , 2018, 165, F3161-F3165.	2.9	80
56	Control of a pulse combustion reactor with thermoacoustic phenomena. <i>Instrumentation Science and Technology</i> , 2018, 46, 43-57.	1.8	6
57	Fluid-enhanced surface diffusion controls intraparticle phase transformations. <i>Nature Materials</i> , 2018, 17, 915-922.	27.5	104
58	Corrosion Protection of Platinum-Based Electrocatalyst by Ruthenium Surface Decoration. <i>ACS Applied Energy Materials</i> , 2018, 1, 3190-3197.	5.1	5
59	Insights into electrochemical dealloying of Cu out of Au-doped Pt-alloy nanoparticles at the sub-nano-scale. <i>Journal of Electrochemical Science and Engineering</i> , 2018, 8, 87-100.	3.5	13
60	Gold Doping in PtCu ₃ /HSAC Nanoparticles and Their Morphological, Structural, and Compositional Changes during Oxygen Reduction Reaction Electrochemical Cycling. <i>ChemCatChem</i> , 2017, 9, 3904-3911.	3.7	12
61	Importance of non-intrinsic platinum dissolution in Pt/C composite fuel cell catalysts. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 21446-21452.	2.8	44
62	Pulse combustion reactor as a fast and scalable synthetic method for preparation of Li-ion cathode materials. <i>Journal of Power Sources</i> , 2017, 363, 218-226.	7.8	10
63	Electrochemical Dissolution of Iridium and Iridium Oxide Particles in Acidic Media: Transmission Electron Microscopy, Electrochemical Flow Cell Coupled to Inductively Coupled Plasma Mass Spectrometry, and X-ray Absorption Spectroscopy Study. <i>Journal of the American Chemical Society</i> , 2017, 139, 12837-12846.	13.7	186
64	Reactivity and Diffusivity of Li Polysulfides: A Fundamental Study Using Impedance Spectroscopy. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 29760-29770.	8.0	61
65	Protective coatings for AA 2024 based on cyclotetrasiloxane and various alkoxysilanes. <i>Corrosion Science</i> , 2017, 126, 55-68.	6.6	11
66	Atomically Resolved Dealloying of Structurally Ordered Pt Nanoalloy as an Oxygen Reduction Reaction Electrocatalyst. <i>ACS Catalysis</i> , 2016, 6, 5530-5534.	11.2	65
67	Potentiodynamic dissolution study of PtRu/C electrocatalyst in the presence of methanol. <i>Electrochimica Acta</i> , 2016, 211, 851-859.	5.2	39
68	Electrochemical in-situ dissolution study of structurally ordered, disordered and gold doped PtCu ₃ nanoparticles on carbon composites. <i>Journal of Power Sources</i> , 2016, 327, 675-680.	7.8	30
69	Quantitative HAADF Study of Twin Boundaries in Cu ₃ Pt Nanoparticles. <i>Microscopy and Microanalysis</i> , 2016, 22, 1338-1339.	0.4	15
70	In situ electrochemical AFM, ex situ IR reflection-absorption and confocal Raman studies of corrosion processes of AA 2024-T3. <i>Corrosion Science</i> , 2016, 104, 290-309.	6.6	25
71	Positive Effect of Surface Doping with Au on the Stability of Pt-Based Electrocatalysts. <i>ACS Catalysis</i> , 2016, 6, 1630-1634.	11.2	90
72	Surface protection of an organic pigment based on a modification using a mixed-micelle system. <i>Dyes and Pigments</i> , 2016, 127, 100-109.	3.7	14

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73	TEM Study of Heavily Twinned Cu ₃ Pt Nanoparticles. <i>Microscopy and Microanalysis</i> , 2015, 21, 1545-1546.	0.4	0
74	Anthraquinone-Based Polymer as Cathode in Rechargeable Magnesium Batteries. <i>ChemSusChem</i> , 2015, 8, 4128-4132.	6.8	137
75	New Insights into Corrosion of Ruthenium and Ruthenium Oxide Nanoparticles in Acidic Media. <i>Journal of Physical Chemistry C</i> , 2015, 119, 10140-10147.	3.1	161
76	Preparation, characterisation and optimisation of lithium battery anodes consisting of silicon synthesised using Laser assisted Chemical Vapour Pyrolysis. <i>Journal of Power Sources</i> , 2015, 273, 380-388.	7.8	5
77	Stimulus-responsive mesoporous silica particles. <i>Journal of Materials Science</i> , 2014, 49, 481-495.	3.7	30
78	SEM method for direct visual tracking of nanoscale morphological changes of platinum based electrocatalysts on fixed locations upon electrochemical or thermal treatments. <i>Ultramicroscopy</i> , 2014, 140, 44-50.	1.9	28
79	New Insight into Platinum Dissolution from Nanoparticulate Platinum-Based Electrocatalysts Using Highly Sensitive In-Situ Concentration Measurements. <i>ChemCatChem</i> , 2014, 6, 449-453.	3.7	119
80	Effect of ordering of PtCu ₃ nanoparticle structure on the activity and stability for the oxygen reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 13610-13615.	2.8	115
81	In-situ TEM and Atomic-Resolution STEM Study of Highly Active Partially Ordered Cu ₃ Pt Nanoparticles used as PEM-Fuel Cells Catalyst. <i>Microscopy and Microanalysis</i> , 2014, 20, 476-477.	0.4	0
82	Stability of commercial Pt/C low temperature fuel cell catalyst: electrochemical IL-SEM study. <i>Acta Chimica Slovenica</i> , 2014, 61, 280-3.	0.6	9
83	Severe accelerated degradation of PEMFC platinum catalyst: A thin film IL-SEM study. <i>Electrochemistry Communications</i> , 2013, 30, 75-78.	4.7	60
84	Spatially Resolved Transport Properties of Pristine and Doped Single-Walled Carbon Nanotube Networks. <i>Journal of Physical Chemistry C</i> , 2013, 117, 13324-13330.	3.1	86
85	Li-ion Battery Analyzed by UV/Vis in Operando Mode. <i>ChemSusChem</i> , 2013, 6, 1177-1181.	6.8	243
86	Identical Location Scanning Electron Microscopy: A Case Study of Electrochemical Degradation of PtNi Nanoparticles Using a New Nondestructive Method. <i>Journal of Physical Chemistry C</i> , 2012, 116, 21326-21333.	3.1	59
87	Guest-host van der Waals interactions decisively affect the molecular transport in mesoporous media. <i>Journal of Materials Chemistry</i> , 2012, 22, 1112-1120.	6.7	19
88	Enhanced Oxygen Reduction and Methanol Oxidation Reaction Activities of Partially Ordered PtCu Nanoparticles. <i>Energy Procedia</i> , 2012, 29, 208-215.	1.8	25
89	Protection of organic pigments against photocatalysis by encapsulation. <i>Journal of Sol-Gel Science and Technology</i> , 2012, 62, 65-74.	2.4	8
90	An attempt to use atomic force microscopy for determination of bond type in lithium battery electrodes. <i>Journal of Materials Chemistry</i> , 2011, 21, 4071.	6.7	36

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91	Zinc-phosphate nanoparticles with reversibly attached TNF- $\hat{\pm}$ analogs: an interesting concept for potential use in active immunotherapy. Journal of Nanoparticle Research, 2011, 13, 3019-3032.	1.9	8
92	The thermodynamic origin of hysteresis in insertion batteries. Nature Materials, 2010, 9, 448-453.	27.5	520
93	On the Interpretation of Measured Impedance Spectra of Insertion Cathodes for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2010, 157, A1218.	2.9	171
94	Comment on the Article "A New Understanding of the Relationship between Solubility and Particle Size" by W. Wu and G. H. Nancollas. Journal of Solution Chemistry, 2009, 38, 135-146.	1.2	11
95	Suspensions of modified TiO ₂ nanoparticles with supreme UV filtering ability,. Journal of Materials Chemistry, 2009, 19, 8176.	6.7	16
96	Beyond One-Electron Reaction in Li Cathode Materials: Designing Li ₂ MnxFe _{1-x} SiO ₄ . Chemistry of Materials, 2007, 19, 3633-3640.	6.7	245
97	Electrochemical kinetics of porous, carbon-decorated LiFePO ₄ cathodes: separation of wiring effects from solid state diffusion. Physical Chemistry Chemical Physics, 2007, 9, 1815-1820.	2.8	57
98	Time Evolution of the Impedance Response of a Passive Film: A Simple Application to the Li/SOCl ₂ system. Journal of the Electrochemical Society, 1999, 146, 933-940.	2.9	17
99	All-Solid-State Measurements of Electrical Properties of Passive Films on Lithium. Journal of the Electrochemical Society, 1996, 143, 1690-1695.	2.9	16