

# Alex Schechter

## List of Publications by Year in descending order

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75  
papers

4,532  
citations

257450

24  
h-index

98798

67  
g-index

76  
all docs

76  
docs citations

76  
times ranked

5984  
citing authors

#	ARTICLE	IF	CITATIONS
1	Prototype systems for rechargeable magnesium batteries. <i>Nature</i> , 2000, 407, 724-727.	27.8	1,946
2	Recent studies on the correlation between surface chemistry, morphology, three-dimensional structures and performance of Li and Li-C intercalation anodes in several important electrolyte systems. <i>Journal of Power Sources</i> , 1997, 68, 91-98.	7.8	444
3	Imidazole and 1-methyl imidazole in phosphoric acid doped polybenzimidazole, electrolyte for fuel cells. <i>Solid State Ionics</i> , 2002, 147, 181-187.	2.7	200
4	X-ray Photoelectron Spectroscopy Study of Surface Films Formed on Li Electrodes Freshly Prepared in Alkyl Carbonate Solutions. <i>Langmuir</i> , 1999, 15, 3334-3342.	3.5	174
5	The Study of Surface Film Formation on Noble-Metal Electrodes in Alkyl Carbonates/Li Salt Solutions, Using Simultaneous in Situ AFM, EQCM, FTIR, and EIS. <i>Langmuir</i> , 1999, 15, 2947-2960.	3.5	131
6	Exceptionally Active and Stable Spinel Nickel Manganese Oxide Electrocatalysts for Urea Oxidation Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 12176-12185.	8.0	130
7	Electrochemical investigation of urea oxidation reaction on $\hat{I}^2$ Ni(OH) <sub>2</sub> and Ni/Ni(OH) <sub>2</sub> . <i>Electrochimica Acta</i> , 2018, 278, 405-411.	5.2	112
8	Four-Electron Oxygen Reduction by Brominated Cobalt Corrole. <i>Inorganic Chemistry</i> , 2012, 51, 22-24.	4.0	105
9	Electrochemical synthesis of ammonia using ruthenium-platinum alloy at ambient pressure and low temperature. <i>Electrochemistry Communications</i> , 2018, 90, 96-100.	4.7	87
10	Current production in a microbial fuel cell using a pure culture of <i>Cupriavidus basilensis</i> growing in acetate or phenol as a carbon source. <i>Microbial Biotechnology</i> , 2013, 6, 425-434.	4.2	78
11	Advances in Catalytic Electrooxidation of Urea: A Review. <i>Energy Technology</i> , 2021, 9, 2100017.	3.8	75
12	Electroactivity of NiCr Catalysts for Urea Oxidation in Alkaline Electrolyte. <i>ChemCatChem</i> , 2017, 9, 3374-3379.	3.7	69
13	Metal-Organic Polymer-Derived Interconnected Fe-Ni Alloy by Carbon Nanotubes as an Advanced Design of Urea Oxidation Catalysts. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 8461-8473.	8.0	62
14	Phenol degradation in bio-electrochemical cells. <i>International Biodeterioration and Biodegradation</i> , 2013, 84, 155-160.	3.9	53
15	Ruthenium Phosphide Synthesis and Electroactivity toward Oxygen Reduction in Acid Solutions. <i>ACS Catalysis</i> , 2015, 5, 4260-4267.	11.2	46
16	Electrochemical Ammonia Generation Directly from Nitrogen and Air Using an Iron-Oxide/Titania-Based Catalyst at Ambient Conditions. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 7981-7989.	8.0	41
17	Enhanced Urea Activity of Oxidation on Nickel-Deposited Tin Dendrites. <i>ChemElectroChem</i> , 2017, 4, 1037-1043.	3.4	36
18	[ <sup>1</sup> H and [ <sup>31</sup> P NMR Study of Phosphoric Acid-Doped Polybenzimidazole under Controlled Water Activity. <i>Journal of the Electrochemical Society</i> , 2009, 156, B283.	2.9	35

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19	A Comparative Study of Plasma-Treated Oxygen-Doped Single-Walled and Multiwalled Carbon Nanotubes as Electrocatalyst for Efficient Oxygen Reduction Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 11396-11406.	6.7	35
20	The Reversible Giant Change in the Contact Angle on the Polysulfone and Polyethersulfone Films Exposed to UV Irradiation. <i>Langmuir</i> , 2008, 24, 5977-5980.	3.5	33
21	Exfoliated molybdenum di-sulfide (MoS <sub>2</sub> ) electrode for hydrogen production in microbial electrolysis cell. <i>Bioelectrochemistry</i> , 2018, 123, 201-210.	4.6	33
22	Superoleophobic Surfaces Obtained via Hierarchical Metallic Meshes. <i>Langmuir</i> , 2016, 32, 4134-4140.	3.5	31
23	Ternary nickel cobalt manganese spinel oxide nanoparticles as heterogeneous electrocatalysts for oxygen evolution and oxygen reduction reaction. <i>Materials Chemistry and Physics</i> , 2019, 229, 190-196.	4.0	31
24	Free-standing, Thermostable, Micrometer-scale Honeycomb Polymer Films and their Properties. <i>Macromolecular Materials and Engineering</i> , 2008, 293, 872-877.	3.6	26
25	Immobilization of bacterial cells on carbon-cloth anode using alginate for hydrogen generation in a microbial electrolysis cell. <i>Journal of Power Sources</i> , 2020, 455, 227986.	7.8	25
26	NH <sub>3</sub> -Plasma pre-treated carbon supported active iron-nitrogen catalyst for oxygen reduction in acid and alkaline electrolytes. <i>Catalysis Science and Technology</i> , 2020, 10, 1675-1687.	4.1	24
27	Electrocatalytic activity of nitrogen plasma treated vertically aligned carbon nanotube carpets towards oxygen reduction reaction. <i>Electrochemistry Communications</i> , 2014, 49, 42-46.	4.7	23
28	Effect of external voltage on <i>Pseudomonas putida</i> F1 in a bio electrochemical cell using toluene as sole carbon and energy source. <i>Microbiology (United Kingdom)</i> , 2012, 158, 414-423.	1.8	22
29	Electrochemical and Chemical Instability of Vanadium Nitride in the Synthesis of Ammonia Directly from Nitrogen. <i>ChemCatChem</i> , 2020, 12, 438-443.	3.7	21
30	Nanoscale mapping of catalytic hotspots on Fe, N-modified HOPG by scanning electrochemical microscopy-atomic force microscopy. <i>Nanoscale</i> , 2018, 10, 6962-6970.	5.6	20
31	Unraveling the Oxygen-Reduction Sites in Graphitic-Carbon Co-N-C-type Electrocatalysts Prepared by Single-Precursor Pyrolysis. <i>ChemCatChem</i> , 2017, 9, 1969-1978.	3.7	18
32	Improvement of Microbial Electrolysis Cell Activity by Using Anode Based on Combined Plasma-Pretreated Carbon Cloth and Stainless Steel. <i>Energies</i> , 2019, 12, 1968.	3.1	18
33	Vertically Aligned Nitrogen-Doped Carbon Nanotube Carpet Electrodes: Highly Sensitive Interfaces for the Analysis of Serum from Patients with Inflammatory Bowel Disease. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 9600-9609.	8.0	16
34	Highly active Pt <sub>x</sub> Pd <sub>y</sub> /SnO <sub>2</sub> /C catalyst for dimethyl ether oxidation in fuel cells. <i>Journal of Power Sources</i> , 2018, 396, 335-344.	7.8	16
35	Plasma-Modified FeCl <sub>3</sub> /C as a Pt-Free Stable ORR Electrocatalyst in an Acid Electrolyte. <i>ACS Applied Energy Materials</i> , 2021, 4, 564-574.	5.1	16
36	Facile and scalable ambient pressure chemical vapor deposition-assisted synthesis of layered silver selenide (I <sup>2</sup> -Ag <sub>2</sub> Se) on Ag foil as a possible oxygen reduction catalyst in alkaline medium. <i>Electrochimica Acta</i> , 2021, 370, 137709.	5.2	16

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37	Surface modifications of carbon nanodots reveal the chemical source of their bright fluorescence. <i>Nanoscale Advances</i> , 2021, 3, 716-724.	4.6	15
38	Novel RuCoSe as non-platinum catalysts for oxygen reduction reaction in microbial fuel cells. <i>Journal of Power Sources</i> , 2017, 362, 140-146.	7.8	14
39	Ultra-Low Loading of Highly Active Pt and PtSn Catalysts on Hierarchical Tin as Anodes in Direct Methanol Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2018, 165, F1242-F1248.	2.9	14
40	Catalytic current mapping of oxygen reduction on isolated Pt particles by atomic force microscopy-scanning electrochemical microscopy. <i>Applied Catalysis B: Environmental</i> , 2019, 256, 117843.	20.2	14
41	Dependable polysulfone based anion exchange membranes incorporating triazatriangulenium cations. <i>Solid State Ionics</i> , 2021, 370, 115731.	2.7	14
42	Electrochemical Oxygen Reduction Activity of Cobalt-Nitrogen-Carbon Composite Catalyst Prepared by Single Precursor Pyrolysis under Autogenic Pressure. <i>Journal of the Electrochemical Society</i> , 2016, 163, F428-F436.	2.9	13
43	Atomic Force Microscopic and Raman Investigation of Boron-Doped Diamond Nanowire Electrodes and Their Activity toward Oxygen Reduction. <i>Journal of Physical Chemistry C</i> , 2017, 121, 3397-3403.	3.1	13
44	Hydrogen Production on Demand by a Pump Controlled Hydrolysis of Granulated Sodium Borohydride. <i>Energy &amp; Fuels</i> , 2021, 35, 11507-11514.	5.1	13
45	Electrochemical Oxidation of Glycine with Bimetallic Nickel <sup>2+</sup> Manganese Oxide Catalysts. <i>ChemElectroChem</i> , 2020, 7, 561-568.	3.4	12
46	Morphological study of branched Sn structure formed under selected electrochemical conditions. <i>Journal of Materials Science</i> , 2016, 51, 8471-8483.	3.7	11
47	Electrodeposited Ternary Fe-Mo-P as an Efficient Electrode Material for Bifunctional Water Splitting in Neutral pH. <i>Electrocatalysis</i> , 2018, 9, 682-688.	3.0	11
48	Simultaneous Mapping of Oxygen Reduction Activity and Hydrogen Peroxide Generation on Electrocatalytic Surfaces. <i>ChemSusChem</i> , 2019, 12, 2708-2714.	6.8	11
49	Dimethyl Ether Oxidation on an Active SnO <sub>2</sub> /Pt/C Catalyst for High-Power Fuel Cells. <i>ChemElectroChem</i> , 2019, 6, 2407-2414.	3.4	11
50	Mechanisms of electrochemical nitrogen gas reduction to ammonia under ambient conditions: a focused review. <i>Journal of Solid State Electrochemistry</i> , 2022, 26, 1897-1917.	2.5	11
51	Hydrogen production on-demand by hydride salt and water two-phase generator. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 15270-15280.	7.1	10
52	The Synthesis of Metallic $\beta$ -Sn Nanostructures for Use as a Novel Pt Catalyst Support and Evaluation of Their Activity Toward Methanol Electrooxidation. <i>Electrocatalysis</i> , 2015, 6, 554-562.	3.0	9
53	Modeling the mechanical behavior of sodium borohydride (NaBH <sub>4</sub> ) powder. <i>Materials and Design</i> , 2016, 108, 240-249.	7.0	8
54	Electrochemical Oxygen Reduction Activity of Metal Embedded Nitrogen Doped Carbon Nanostructures Derived from Pyrolysis of Nitrogen-Rich Guanidinium Salt. <i>Journal of the Electrochemical Society</i> , 2017, 164, F781-F789.	2.9	8

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55	Pd-Decorated Tungsten as Pt-Free Bimetallic Catalysts for Hydrogen Oxidation Reaction in Alkaline Electrolyte. <i>Israel Journal of Chemistry</i> , 2020, 60, 563-569.	2.3	8
56	Bioinspired oxygen selective membrane for Zn-air batteries. <i>Journal of Materials Science</i> , 2021, 56, 9382-9394.	3.7	8
57	Spinel Nickel Ferrite Nanoparticles Supported on a 1T/2H Mixed-Phase MoS <sub>2</sub> Heterostructured Composite as a Bifunctional Electrocatalyst for Oxygen Evolution and Oxygen Reduction Reactions. <i>Energy &amp; Fuels</i> , 2022, 36, 7782-7794.	5.1	8
58	Hydrogen production in a semi-single-chamber microbial electrolysis cell based on anode encapsulated in a dialysis bag. <i>International Journal of Energy Research</i> , 2021, 45, 19074.	4.5	6
59	Tailored Pt Coatings on Metallic Tin—An Effective Catalyst for Fuel Cells Anodes. <i>Journal of the Electrochemical Society</i> , 2020, 167, 044512.	2.9	5
60	Edge Cooling of a Fuel Cell during Aerial Missions by Ambient Air. <i>Micromachines</i> , 2021, 12, 1432.	2.9	5
61	Hydrogen Production in Microbial Electrolysis Cells Based on Bacterial Anodes Encapsulated in a Small Bioreactor Platform. <i>Microorganisms</i> , 2022, 10, 1007.	3.6	5
62	Insights on the Electrochemical Atomic Force Microscopic Catalytic Oxygen Reduction on Tip Guided Platinum Particle Deposits. <i>Electrochimica Acta</i> , 2016, 217, 100-107.	5.2	4
63	Methyl formate and dimethyl ether electro-oxidation on Pt Pd Sn catalyst supported on carbon nanotube decorated with carbon dots. <i>Materials Today Sustainability</i> , 2022, 17, 100095.	4.1	4
64	How to grow a movable mini-garden in a droplet: Growing chemical gardens in a water and aqueous ethanol solutions droplets deposited on a superhydrophobic surface. <i>Colloids and Interface Science Communications</i> , 2015, 7, 12-15.	4.1	3
65	On the synthesis of RuSe oxygen reduction nano-catalysts for direct methanol fuel cells. <i>Journal of Solid State Electrochemistry</i> , 2017, 21, 3103-3111.	2.5	3
66	Titanium hydride—a stable support for Pt catalysts in oxygen reduction reaction. <i>Journal of Solid State Electrochemistry</i> , 2018, 22, 2049-2058.	2.5	3
67	Functionalization of Graphene—A Critical Overview of its Improved Physical, Chemical and Electrochemical Properties. <i>Carbon Nanostructures</i> , 2019, , 139-173.	0.1	3
68	Effect of Mn Doped Ni-Co Mixed Oxide Catalysts on Urea Oxidation. <i>ChemCatChem</i> , 2022, 14, .	3.7	3
69	Enhancement of Electrochemical Activity in Bioelectrochemical Systems by Using Bacterial Anodes: An Overview. , 2020, , 211-238.		2
70	Recent Studies of Interfacial Phenomena which Determine the Electrochemical Behavior of Lithium and Lithiated Carbon Anodes with the Emphasis on In Situ Techniques. <i>Materials Research Society Symposia Proceedings</i> , 1997, 496, 587.	0.1	1
71	High resolution remote sensing of particles and aerosols in the W-band (92-100 GHz). , 2011, , .		0
72	Simultaneous SECM-AFM-Ters Mapping of Electrocatalytic Reactions on a Nanometric Scale. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0

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73	Ammonia Electrochemical Synthesis Using Platinum Ruthenium Alloy at Ambient Pressure and Low Temperature. ECS Meeting Abstracts, 2019, , .	0.0	0
74	Enhanced Anodic Reaction of Dimethyl Ether (DME) on PtPdSn Based Catalysts for High Power Low Temperature Fuel Cells. ECS Meeting Abstracts, 2019, , .	0.0	0
75	Plasma Treatment As an Effective Way of Modifying Carbon-Based Electrocatalysts for an Enhanced Oxygen Reduction Reaction. ECS Meeting Abstracts, 2020, MA2020-01, 1620-1620.	0.0	0