Olga Kasian

List of Publications by Year
in descending order

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66 papers	5,269 citations	117453 34 h-index	118652 62 g-index
67 all docs	67 docs citations	67 times ranked	6075 citing authors

#	Article	IF	Citations
1	Oxygen and hydrogen evolution reactions on Ru, RuO 2 , Ir, and IrO 2 thin film electrodes in acidic and alkaline electrolytes: A comparative study on activity and stability. Catalysis Today, 2016, 262, 170-180.	2.2	999
2	The stability number as a metric for electrocatalyst stability benchmarking. Nature Catalysis, 2018, 1, 508-515.	16.1	533
3	The Common Intermediates of Oxygen Evolution and Dissolution Reactions during Water Electrolysis on Iridium. Angewandte Chemie - International Edition, 2018, 57, 2488-2491.	7.2	331
4	Oxygen evolution activity and stability of iridium in acidic media. Part 2. â€“ Electrochemically grown hydrous iridium oxide. Journal of Electroanalytical Chemistry, 2016, 774, 102-110.	1.9	209
5	Minimizing Operando Demetallation of Fe-N-C Electrocatalysts in Acidic Medium. ACS Catalysis, 2016, 6, 3136-3146.	5.5	201
6	Unraveling the Nature of Sites Active toward Hydrogen Peroxide Reduction in Feâ€Nâ€C Catalysts. Angewandte Chemie - International Edition, 2017, 56, 8809-8812.	7.2	176
7	Atomic-scale insights into surface species of electrocatalysts in three dimensions. Nature Catalysis, 2018, 1, 300-305.	16.1	161
8	Oxygen evolution activity and stability of iridium in acidic media. Part 1. â€“ Metallic iridium. Journal of Electroanalytical Chemistry, 2016, 773, 69-78.	1.9	159
9	Degradation of iridium oxides via oxygen evolution from the lattice: correlating atomic scale structure with reaction mechanisms. Energy and Environmental Science, 2019, 12, 3548-3555.	15.6	147
10	Activity and Stability of Electrochemically and Thermally Treated Iridium for the Oxygen Evolution Reaction. Journal of the Electrochemical Society, 2016, 163, F3132-F3138.	1.3	140
11	Stability limits of tin-based electrocatalyst supports. Scientific Reports, 2017, 7, 4595.	1.6	127
12	A bilayer conducting polymer structure for planar perovskite solar cells with over 1,400â€‰hours operational stability at elevated temperatures. Nature Energy, 2022, 7, 144-152.	19.8	123
13	Stability and Activity of Nonâ€Nobleâ€Metalâ€Based Catalysts Toward the Hydrogen Evolution Reaction. Angewandte Chemie - International Edition, 2017, 56, 9767-9771.	7.2	118
14	Nickel-molybdenum alloy catalysts for the hydrogen evolution reaction: Activity and stability revised. Electrochimica Acta, 2018, 259, 1154-1161.	2.6	116
15	Electrocatalytic synthesis of hydrogen peroxide on Au-Pd nanoparticles: From fundamentals to continuous production. Chemical Physics Letters, 2017, 683, 436-442.	1.2	112
16	Catalyst Stability Benchmarking for the Oxygen Evolution Reaction: The Importance of Backing Electrode Material and Dissolution in Accelerated Aging Studies. ChemSusChem, 2017, 10, 4140-4143.	3.6	111
17	Electrochemical Onâ€line ICPâ€MS in Electrocatalysis Research. Chemical Record, 2019, 19, 2130-2142.	2.9	92
18	Electrifying model catalysts for understanding electrocatalytic reactions in liquid electrolytes. Nature Materials, 2018, 17, 592-598.	13.3	89

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19	On the Origin of the Improved Ruthenium Stability in RuO₂â€“IrO₂Mixed Oxides. Journal of the Electrochemical Society, 2016, 163, F3099-F3104.	1.3	82
20	The Electrochemical Dissolution of Noble Metals in Alkaline Media. Electrocatalysis, 2018, 9, 153-161.	1.5	82
21	Lattice Oxygen Exchange in Rutile IrO₂ during the Oxygen Evolution Reaction. Journal of Physical Chemistry Letters, 2020, 11, 5008-5014.	2.1	81
22	Insight into the Mechanisms of High Activity and Stability of Iridium Supported on Antimony-Doped Tin Oxide Aerogel for Anodes of Proton Exchange Membrane Water Electrolyzers. ACS Catalysis, 2020, 10, 2508-2516.	5.5	67
23	An alkaline water electrolyzer with nickel electrodes enables efficient high current densityÂoperation. International Journal of Hydrogen Energy, 2018, 43, 11932-11938.	3.8	66
24	Solute hydrogen and deuterium observed at the near atomic scale in high-strength steel. Acta Materialia, 2020, 188, 108-120.	3.8	64
25	Why Tinâ€Doping Enhances the Efficiency of Hematite Photoanodes for Water Splittingâ€”The Full Picture. Advanced Functional Materials, 2018, 28, 1804472.	7.8	53
26	Impact of Palladium Loading and Interparticle Distance on the Selectivity for the Oxygen Reduction Reaction toward Hydrogen Peroxide. Journal of Physical Chemistry C, 2018, 122, 15878-15885.	1.5	53
27	Enhanced Photoelectrochemical Water Oxidation Performance by Fluorine Incorporation in BiVO₄ and Mo:BiVO₄ Thin Film Photoanodes. ACS Applied Materials & Interfaces, 2019, 11, 16430-16442.	4.0	52
28	Melamine-functionalized graphene oxide: Synthesis, characterization and considering as pseudocapacitor electrode material with intermixed POAP polymer. Applied Surface Science, 2018, 459, 874-883.	3.1	50
29	Dissolution of BiVO₄ Photoanodes Revealed by Time-Resolved Measurements under Photoelectrochemical Conditions. Journal of Physical Chemistry C, 2019, 123, 23410-23418.	1.5	47
30	Individual Detection and Electrochemically Assisted Identification of Adsorbed Nanoparticles by Using Surface Plasmon Microscopy. Angewandte Chemie - International Edition, 2016, 55, 7247-7251.	7.2	43
31	Atomicâ€Scale Mapping of Impurities in Partially Reduced Hollow TiO₂ Nanowires. Angewandte Chemie - International Edition, 2020, 59, 5651-5655.	7.2	42
32	Different Photostability of BiVO₄ in Near-pH-Neutral Electrolytes. ACS Applied Energy Materials, 2020, 3, 9523-9527.	2.5	41
33	Operando Structureâ€“Activityâ€“Stability Relationship of Iridium Oxides during the Oxygen Evolution Reaction. ACS Catalysis, 2022, 12, 5174-5184.	5.5	40
34	Improved Hydrogen Oxidation Reaction Activity and Stability of Buried Metal-Oxide Electrocatalyst Interfaces. Chemistry of Materials, 2020, 32, 7716-7724.	3.2	38
35	Die gemeinsamen Zwischenprodukte von Sauerstoffentwicklung und AuflÃ¶sung wÃ¤hrend der Wasserelektrolyse an Iridium. Angewandte Chemie, 2018, 130, 2514-2517.	1.6	37
36	Atomically Defined Co₃O₄(111) Thin Films Prepared in Ultrahigh Vacuum: Stability under Electrochemical Conditions. Journal of Physical Chemistry C, 2018, 122, 7236-7248.	1.5	34

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37	Electrochemical dissolution of gold in presence of chloride and bromide traces studied by on-line electrochemical inductively coupled plasma mass spectrometry. Electrochimica Acta, 2016, 222, 1056-1063.	2.6	33
38	Alkaline manganese electrochemistry studied byin situandoperandospectroscopic methods â€“ metal dissolution, oxide formation and oxygen evolution. Physical Chemistry Chemical Physics, 2019, 21, 10457-10469.	1.3	32
39	Superior solar-to-hydrogen energy conversion efficiency by visible light-driven hydrogen production via highly reduced Ti²⁺/Ti³⁺ states in a blue titanium dioxide photocatalyst. Catalysis Science and Technology, 2018, 8, 4657-4664.	2.1	30
40	Electrochemical properties of thermally treated platinized EbonexÂ® with low content of Pt. Electrochimica Acta, 2013, 109, 630-637.	2.6	29
41	Direct Imaging of Dopant and Impurity Distributions in 2D MoS₂. Advanced Materials, 2020, 32, e1907235.	11.1	26
42	Defect Segregation and Its Effect on the Photoelectrochemical Properties of Ti-Doped Hematite Photoanodes for Solar Water Splitting. Chemistry of Materials, 2020, 32, 1031-1040.	3.2	23
43	Using Instability of a Non-stoichiometric Mixed Oxide Oxygen Evolution Catalyst As a Tool to Improve Its Electrocatalytic Performance. Electrocatalysis, 2018, 9, 139-145.	1.5	20
44	Probing catalytic surfaces by correlative scanning photoemission electron microscopy and atom probe tomography. Journal of Materials Chemistry A, 2020, 8, 388-400.	5.2	19
45	Stabilization of an iridium oxygen evolution catalyst by titanium oxides. JPhys Energy, 2021, 3, 034006.	2.3	19
46	Stability and Activity of Nonâ€Nobleâ€Metalâ€Based Catalysts Toward the Hydrogen Evolution Reaction. Angewandte Chemie, 2017, 129, 9899-9903.	1.6	17
47	Unraveling the Nature of Sites Active toward Hydrogen Peroxide Reduction in Feâ€Nâ€C Catalysts. Angewandte Chemie, 2017, 129, 8935-8938.	1.6	16
48	State of the Surface of Antibacterial Copper in Phosphate Buffered Saline. Journal of the Electrochemical Society, 2017, 164, H734-H742.	1.3	14
49	Fused Filament Fabricationâ€Based Additive Manufacturing of Commercially Pure Titanium. Advanced Engineering Materials, 2021, 23, 2100380.	1.6	13
50	Controlled Doping of Electrocatalysts through Engineering Impurities. Advanced Materials, 2022, 34, e2203030.	11.1	12
51	Formation of a 2D Meta-stable Oxide by Differential Oxidation of AgCu Alloys. ACS Applied Materials & Interfaces, 2020, 12, 23595-23605.	4.0	9
52	Oxidation of Cr3+-Ions at the Composite TiOkhcy/PtOu Electrode. ECS Transactions, 2013, 45, 13-18.	0.3	8
53	Anodic Decomposition of Complexing Agents in Electrolytes Based on Cr(III) Salts at Composite Đ¢Ñ–ĐžÑ…/ĐtĐžÑf Electrodes. Chemistry and Chemical Technology, 2012, 6, 241-244.	0.2	7
54	Synthesis and Doping Strategies to Improve the Photoelectrochemical Water Oxidation Activity of BiVO₄ Photoanodes. Zeitschrift Fur Physikalische Chemie, 2020, 234, 655-682.	1.4	6

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55	Electrochemical properties of heat-treated platinized titanium. Protection of Metals and Physical Chemistry of Surfaces, 2013, 49, 559-566.	0.3	5
56	Extension of the Rotating Disk Electrode Method to Thin Samples of Non-Disk Shape. Journal of the Electrochemical Society, 2019, 166, H791-H794.	1.3	5
57	Tuning the Anodic and Cathodic Dissolution of Gold by Varying the Surface Roughness. ChemElectroChem, 2021, 8, 1524-1530.	1.7	3
58	Anodic oxidation of Cr3+ ions in a chromium electroplating bath on Pt and composite TiO x /PtO y. Russian Journal of Electrochemistry, 2013, 49, 1165-1170.	0.3	2
59	Electrochemical properties of EbonexÂ®/Pt anodes. Russian Journal of Electrochemistry, 2013, 49, 557-562.	0.3	2
60	Physicochemical properties and electrochemical behavior of Ebonex/Pt-based materials. Protection of Metals and Physical Chemistry of Surfaces, 2013, 49, 705-711.	0.3	1
61	An Integrated Workflow To Investigate Electrocatalytic Surfaces By Correlative X-ray Photoemission Spectroscopy, Scanning Photoemission Electron Microscopy and Atom Probe Tomography. Microscopy and Microanalysis, 2019, 25, 306-307.	0.2	1
62	Tuning Fundamental Properties of Ir-Based Materials to Enhance Their Electrocatalytic Performance in the Oxygen Evolution Reaction. ECS Meeting Abstracts, 2020, MA2020-01, 1557-1557.	0.0	0
63	Atomic-Scale View into the Degradation of Ir-Ru Alloys during Anodic Oxygen Evolution. ECS Meeting Abstracts, 2020, MA2020-01, 1520-1520.	0.0	0
64	New Frontiers in Electrocatalyst Characterization â€“ Three Dimensional Atomic-Scale Insights By Atom Probe Tomography. ECS Meeting Abstracts, 2020, MA2020-01, 2561-2561.	0.0	0
65	Improving Stability and Kinetics of Alkaline HOR Catalysts â€“ Towards Reduced System Cost. ECS Meeting Abstracts, 2020, MA2020-01, 1686-1686.	0.0	0
66	(Invited) From Atomic-Scale Understanding to Design of Advanced Electrocatalyst Materials. ECS Meeting Abstracts, 2020, MA2020-02, 3154-3154.	0.0	0