Ioannis Katsounaros

List of Publications by Year
in descending order

80	7,771	94381 37	95218 68
papers	citations	h-index	g-index

86	86	86	8305
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Oxygen Electrochemistry as a Cornerstone for Sustainable Energy Conversion. Angewandte Chemie - International Edition, 2014, 53, 102-121.	7.2	1,186
2	Electrocatalytic Nitrate Reduction for Sustainable Ammonia Production. Joule, 2021, 5, 290-294.	11.7	497
3	Degradation Mechanisms of Pt/C Fuel Cell Catalysts under Simulated Startâ€“Stop Conditions. ACS Catalysis, 2012, 2, 832-843.	5.5	470
4	The Particle Size Effect on the Oxygen Reduction Reaction Activity of Pt Catalysts: Influence of Electrolyte and Relation to Single Crystal Models. Journal of the American Chemical Society, 2011, 133, 17428-17433.	6.6	461
5	Design criteria for stable Pt/C fuel cell catalysts. Beilstein Journal of Nanotechnology, 2014, 5, 44-67.	1.5	408
6	Dissolution of Noble Metals during Oxygen Evolution in Acidic Media. ChemCatChem, 2014, 6, 2219-2223.	1.8	394
7	Dissolution of Platinum: Limits for the Deployment of Electrochemical Energy Conversion?. Angewandte Chemie - International Edition, 2012, 51, 12613-12615.	7.2	352
8	Towards a comprehensive understanding of platinum dissolution in acidic media. Chemical Science, 2014, 5, 631-638.	3.7	337
9	Hydrogen peroxide electrochemistry on platinum: towards understanding the oxygen reduction reaction mechanism. Physical Chemistry Chemical Physics, 2012, 14, 7384.	1.3	304
10	Electrocatalytic reduction of Nitrate on Copper single crystals in acidic and alkaline solutions.. Electrochimica Acta, 2017, 227, 77-84.	2.6	258
11	Toward Highly Stable Electrocatalysts via Nanoparticle Pore Confinement. Journal of the American Chemical Society, 2012, 134, 20457-20465.	6.6	235
12	Stability investigations of electrocatalysts on the nanoscale. Energy and Environmental Science, 2012, 5, 9319.	15.6	230
13	Near-surface ion distribution and buffer effects during electrochemical reactions. Physical Chemistry Chemical Physics, 2011, 13, 16384.	1.3	166
14	Efficient electrochemical reduction of nitrate to nitrogen on tin cathode at very high cathodic potentials. Electrochimica Acta, 2006, 52, 1329-1338.	2.6	163
15	The effective surface pH during reactions at the solidâ€“liquid interface. Electrochemistry Communications, 2011, 13, 634-637.	2.3	161
16	Gold dissolution: towards understanding of noble metal corrosion. RSC Advances, 2013, 3, 16516.	1.7	142
17	Structure- and Coverage-Sensitive Mechanism of NO Reduction on Platinum Electrodes. ACS Catalysis, 2017, 7, 4660-4667.	5.5	118
18	Influence of the concentration and the nature of the supporting electrolyte on the electrochemical reduction of nitrate on tin cathode. Electrochimica Acta, 2007, 52, 6412-6420.	2.6	114

#	Article	IF	Citations
19	Influence of nitrate concentration on its electrochemical reduction on tin cathode: Identification of reaction intermediates. Electrochimica Acta, 2008, 53, 5477-5484.	2.6	109
20	Electrocatalytic activity of BasoliteTM F300 metal-organic-framework structures. Electrochemistry Communications, 2010, 12, 632-635.	2.3	99
21	Electrochemical reduction of nitrate and nitrite in simulated liquid nuclear wastes. Journal of Hazardous Materials, 2009, 171, 323-327.	6.5	93
22	A Scanning Flow Cell System for Fully Automated Screening of Electrocatalyst Materials. Journal of the Electrochemical Society, 2012, 159, F670-F675.	1.3	92
23	The impact of spectator species on the interaction of H2O2 with platinum â€“ implications for the oxygen reduction reaction pathways. Physical Chemistry Chemical Physics, 2013, 15, 8058.	1.3	85
24	Electrochemical dissolution of gold in acidic medium. Electrochemistry Communications, 2013, 28, 44-46.	2.3	78
25	Towards an efficient liquid organic hydrogen carrier fuel cell concept. Energy and Environmental Science, 2019, 12, 2305-2314.	15.6	73
26	On the mechanism of the electrochemical conversion of ammonia to dinitrogen on Pt(1â€¯0â€¯0) in alkaline environment. Journal of Catalysis, 2018, 359, 82-91.	3.1	62
27	Evidence for Decoupled Electron and Proton Transfer in the Electrochemical Oxidation of Ammonia on Pt(100). Journal of Physical Chemistry Letters, 2016, 7, 387-392.	2.1	57
28	Probing CO₂ Reduction Pathways for Copper Catalysis Using an Ionic Liquid as a Chemical Trapping Agent. Angewandte Chemie - International Edition, 2020, 59, 18095-18102.	7.2	56
29	Ag₂Cu₂O₃ â€“ a catalyst template material for selective electroreduction of CO to C₂₊ products. Energy and Environmental Science, 2020, 13, 2993-3006.	15.6	55
30	Time and potential resolved dissolution analysis of rhodium using a microelectrochemical flow cell coupled to an ICP-MS. Journal of Electroanalytical Chemistry, 2012, 677-680, 50-55.	1.9	53
31	Electrochemical Realâ€Time Mass Spectrometry (ECâ€RTMS): Monitoring Electrochemical Reaction Products in Real Time. Angewandte Chemie - International Edition, 2019, 58, 7273-7277.	7.2	50
32	Influence of the electrode and the pH on the rate and the product distribution of the electrochemical removal of nitrate. Environmental Technology (United Kingdom), 2013, 34, 373-381.	1.2	48
33	Dissolution of Platinum Single Crystals in Acidic Medium. ChemPhysChem, 2019, 20, 2997-3003.	1.0	42
34	Development and integration of a LabVIEW-based modular architecture for automated execution of electrochemical catalyst testing. Review of Scientific Instruments, 2011, 82, 114103.	0.6	40
35	The influence of non-covalent interactions on the hydrogen peroxide electrochemistry on platinum in alkaline electrolytes. Chemical Communications, 2012, 48, 6660.	2.2	40
36	Interconversions of nitrogen-containing species on Pt(100) and Pt(111) electrodes in acidic solutions containing nitrate. Electrochimica Acta, 2018, 271, 77-83.	2.6	36

#	Article	IF	Citations
37	Insights into Liquid Product Formation during Carbon Dioxide Reduction on Copper and Oxide-Derived Copper from Quantitative Real-Time Measurements. ACS Catalysis, 2020, 10, 6735-6740.	5.5	36
38	Reaction pathways in the electrochemical reduction of nitrate on tin. Electrochimica Acta, 2012, 71, 270-276.	2.6	35
39	The impact of chloride ions and the catalyst loading on the reduction of H2O2 on high-surface-area platinum catalysts. Electrochimica Acta, 2013, 110, 790-795.	2.6	34
40	Secondary Alcohols as Rechargeable Electrofuels: Electrooxidation of Isopropyl Alcohol at Pt Electrodes. ACS Catalysis, 2020, 10, 6831-6842.	5.5	32
41	Electrochemical removal of nitrate from the spent regenerant solution of the ion exchange. Desalination, 2009, 248, 923-930.	4.0	26
42	The oxygen reduction reaction on palladium with low metal loadings: The effects of chlorides on the stability and activity towards hydrogen peroxide. Journal of Catalysis, 2020, 389, 400-408.	3.1	25
43	On the assessment of electrocatalysts for nitrate reduction. Current Opinion in Electrochemistry, 2021, 28, 100721.	2.5	24
44	Electrochemical Oxidation of Isopropanol on Platinumâ€“Ruthenium Nanoparticles Studied with Real-Time Product and Dissolution Analytics. ACS Applied Materials & Interfaces, 2020, 12, 33670-33678.	4.0	21
45	Understanding the Oxygen Reduction Reaction Activity of Quasi-1D and 2D N-Doped Heat-Treated Graphene Oxide Catalysts with Inherent Metal Impurities. ACS Applied Energy Materials, 2021, 4, 3593-3603.	2.5	21
46	Electroreductive 5â€Hydroxymethylfurfural Dimerization on Carbon Electrodes. ChemSusChem, 2021, 14, 5245-5253.	3.6	20
47	Electrochemical Realâ€Time Mass Spectrometry (ECâ€RTMS): Monitoring Electrochemical Reaction Products in Real Time. Angewandte Chemie, 2019, 131, 7351-7355.	1.6	19
48	The 2â€Propanol Fuel Cell: A Review from the Perspective of a Hydrogen Energy Economy. Energy Technology, 2021, 9, 2100164.	1.8	19
49	Atomically-defined model catalysts in ultrahigh vacuum and in liquid electrolytes: particle size-dependent CO adsorption on Pt nanoparticles on ordered Co₃O₄(111) films. Physical Chemistry Chemical Physics, 2018, 20, 23702-23716.	1.3	13
50	Electrocatalysis for the Hydrogen Economy. , 2017, , 23-50.		11
51	Different promoting roles of ruthenium for the oxidation of primary and secondary alcohols on PtRu electrocatalysts. Journal of Catalysis, 2021, 400, 166-172.	3.1	11
52	CO₂ Electroreduction on Silver Foams Modified by Ionic Liquids with Different Cation Side Chain Length. ACS Applied Materials & Interfaces, 2022, 14, 14193-14201.	4.0	11
53	Computationally Efficient Variational Approximations for Bayesian Inverse Problems. Journal of Verification, Validation and Uncertainty Quantification, 2016, 1, .	0.3	10
54	Analysing the relationship between the fields of thermo- and electrocatalysis taking hydrogen peroxide as a case study. Nature Communications, 2022, 13, 1973.	5.8	9

#	Article	IF	Citations
55	Degradation of polycrystalline rhodium and rhodium nanoparticles. Electrochimica Acta, 2012, 70, 355-359.	2.6	7
56	Impact of catalyst loading, ionomer content, and carbon support on the performance of direct isopropanol fuel cells. Journal of Power Sources Advances, 2021, 10, 100064.	2.6	7
57	Electrooxidation of saturated C1-C3 primary alcohols on platinum: Potential-resolved product analysis with electrochemical real-time mass spectrometry (EC-RTMS). Electrochimica Acta, 2019, 315, 67-74.	2.6	6
58	Probing CO 2 Reduction Pathways for Copper Catalysis Using an Ionic Liquid as a Chemical Trapping Agent. Angewandte Chemie, 2020, 132, 18251-18258.	1.6	6
59	Oxide Reduction Precedes Carbon Dioxide Reduction on Oxide-Derived Copper Electrodes. Journal of Physical Chemistry C, 2021, 125, 1833-1838.	1.5	6
60	Electrochemical removal of bromate from drinking water. Desalination and Water Treatment, 2013, 51, 2889-2894.	1.0	5
61	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
62	Implementation of an enclosed ionization interface for the analysis of liquid sample streams with direct analysis in real time mass spectrometry. Rapid Communications in Mass Spectrometry, 2021, 35, e9091.	0.7	5
63	Computational-experimental study of the onset potentials for CO2 reduction on polycrystalline and oxide-derived copper electrodes. Electrochimica Acta, 2021, 380, 138247.	2.6	4
64	Quantitative Determination of Hyponitrite and Hyponitrate by Ion Chromatography. Chromatographia, 2009, 70, 315-317.	0.7	1
65	Nitrate Reduction on Noble Metal Electrodes. , 2018, , 761-768.		1
66	Titelbild: Electrochemical Realâ€Time Mass Spectrometry (ECâ€RTMS): Monitoring Electrochemical Reaction Products in Real Time (Angew. Chem. 22/2019). Angewandte Chemie, 2019, 131, 7219-7219.	1.6	0
67	InnenrÃ¼cktitelbild: Probing CO₂ Reduction Pathways for Copper Catalysis Using an Ionic Liquid as a Chemical Trapping Agent (Angew. Chem. 41/2020). Angewandte Chemie, 2020, 132, 18431-18431.	1.6	0
68	Primary Vs. Secondary Alcohols Electrooxidation: Mechanistic Insights. ECS Meeting Abstracts, 2021, MA2021-01, 1870-1870.	0.0	0
69	Electrochemistry of Hydrogen Peroxide and Its Essential Role in the Oxygen Reduction Reaction. ECS Meeting Abstracts, 2014, , .	0.0	0
70	(Invited) Electrocatalysis of Ammonia Oxidation Reaction on Pt(100) in Alkaline Solutions. ECS Meeting Abstracts, 2015, , .	0.0	0
71	VARIATIONAL REFORMULATION OF BAYESIAN INVERSE PROBLEMS. , 2015, , .		0
72	Real-Time Characterization of Electrochemical Reaction Products. ECS Meeting Abstracts, 2019, , .	0.0	0

#	Article	IF	Citations
73	Time-Resolved Analysis of CO2 Reduction Products on Copper and Oxide-Derived Copper Electrodes. ECS Meeting Abstracts, 2020, MA2020-01, 2558-2558.	0.0	0
74	A Holistic Approach to Develop Novel Processes for the Sustainable Electrochemical Synthesis of Fuels and Chemicals. ECS Meeting Abstracts, 2020, MA2020-01, 1499-1499.	0.0	0
75	Activity and Selectivity of Pd-Based Catalysts for the Electrochemical Conversion of CO2 to CO. ECS Meeting Abstracts, 2020, MA2020-01, 2631-2631.	0.0	0
76	Electrochemical HMF Valorization to Fuel Precursors. ECS Meeting Abstracts, 2021, MA2021-02, 778-778.	0.0	0
77	Tracking Reaction Products in Real Time. , 0, , .		0
78	(Invited) Tracking CO2 Reduction Products in Real Time. ECS Meeting Abstracts, 2020, MA2020-02, 3195-3195.	0.0	0
79	Tuning Electrode-Electrolyte Interface for the Electrochemical Reduction of HMF. ECS Meeting Abstracts, 2021, MA2021-02, 781-781.	0.0	0
80	Influence of the Electrode-Electrolyte Interface on the Product Distribution of the HMF Electroreduction. ECS Meeting Abstracts, 2022, MA2022-01, 1546-1546.	0.0	0