

Matthias Arenz

List of Publications by Year in descending order

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168
papers

12,813
citations

38742

50
h-index

24258

110
g-index

208
all docs

208
docs citations

208
times ranked

10904
citing authors

#	ARTICLE	IF	CITATIONS
1	Trends in electrocatalysis on extended and nanoscale Pt-bimetallic alloy surfaces. <i>Nature Materials</i> , 2007, 6, 241-247.	27.5	2,902
2	Measurement of oxygen reduction activities via the rotating disc electrode method: From Pt model surfaces to carbon-supported high surface area catalysts. <i>Electrochimica Acta</i> , 2008, 53, 3181-3188.	5.2	888
3	The Impact of Geometric and Surface Electronic Properties of Pt-Catalysts on the Particle Size Effect in Electrocatalysis. <i>Journal of Physical Chemistry B</i> , 2005, 109, 14433-14440.	2.6	613
4	The Effect of the Particle Size on the Kinetics of CO Electrooxidation on High Surface Area Pt Catalysts. <i>Journal of the American Chemical Society</i> , 2005, 127, 6819-6829.	13.7	514
5	The Particle Size Effect on the Oxygen Reduction Reaction Activity of Pt Catalysts: Influence of Electrolyte and Relation to Single Crystal Models. <i>Journal of the American Chemical Society</i> , 2011, 133, 17428-17433.	13.7	461
6	The effect of particle proximity on the oxygen reduction rate of size-selected platinum clusters. <i>Nature Materials</i> , 2013, 12, 919-924.	27.5	327
7	Fuel cell catalyst degradation on the nanoscale. <i>Electrochemistry Communications</i> , 2008, 10, 1144-1147.	4.7	309
8	Adsorbate-Induced Surface Segregation for Core-Shell Nanocatalysts. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 3529-3531.	13.8	295
9	Oxygen electrocatalysis in alkaline electrolyte: Pt(hkl), Au(hkl) and the effect of Pd-modification. <i>Electrochimica Acta</i> , 2002, 47, 3765-3776.	5.2	209
10	The electro-oxidation of formic acid on Pt-Pd single crystal bimetallic surfaces. <i>Physical Chemistry Chemical Physics</i> , 2003, 5, 4242-4251.	2.8	203
11	Factors in gold nanocatalysis: oxidation of CO in the non-scalable size regime. <i>Topics in Catalysis</i> , 2007, 44, 145-158.	2.8	190
12	Degradation of Carbon-Supported Pt Bimetallic Nanoparticles by Surface Segregation. <i>Journal of the American Chemical Society</i> , 2009, 131, 16348-16349.	13.7	182
13	Comparative degradation study of carbon supported proton exchange membrane fuel cell electrocatalysts – The influence of the platinum to carbon ratio on the degradation rate. <i>Journal of Power Sources</i> , 2014, 261, 14-22.	7.8	163
14	Carbon-supported Pt-Sn electrocatalysts for the anodic oxidation of H ₂ , CO, and H ₂ /CO mixtures. Part II: The structure-activity relationship. <i>Journal of Catalysis</i> , 2005, 232, 402-410.	6.2	156
15	CO surface electrochemistry on Pt-nanoparticles: A selective review. <i>Electrochimica Acta</i> , 2005, 50, 5144-5154.	5.2	154
16	Non-destructive transmission electron microscopy study of catalyst degradation under electrochemical treatment. <i>Journal of Power Sources</i> , 2008, 185, 734-739.	7.8	150
17	Benchmarking high surface area electrocatalysts in a gas diffusion electrode: measurement of oxygen reduction activities under realistic conditions. <i>Energy and Environmental Science</i> , 2018, 11, 988-994.	30.8	147
18	Anion Adsorption, CO Oxidation, and Oxygen Reduction Reaction on a Au(100) Surface: The pH Effect. <i>Journal of Physical Chemistry B</i> , 2004, 108, 625-634.	2.6	143

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19	Self-supported Pt-CoO networks combining high specific activity with high surface area for oxygen reduction. <i>Nature Materials</i> , 2021, 20, 208-213.	27.5	139
20	Surface Chemistry on Bimetallic Alloy Surfaces: Adsorption of Anions and Oxidation of CO on Pt ₃ Sn(111). <i>Journal of the American Chemical Society</i> , 2003, 125, 2736-2745.	13.7	127
21	IL-TEM investigations on the degradation mechanism of Pt/C electrocatalysts with different carbon supports. <i>Energy and Environmental Science</i> , 2011, 4, 234-238.	30.8	124
22	CO Combustion on Supported Gold Clusters. <i>ChemPhysChem</i> , 2006, 7, 1871-1879.	2.1	121
23	Investigating Particle Size Effects in Catalysis by Applying a Size-Controlled and Surfactant-Free Synthesis of Colloidal Nanoparticles in Alkaline Ethylene Glycol: Case Study of the Oxygen Reduction Reaction on Pt. <i>ACS Catalysis</i> , 2018, 8, 6627-6635.	11.2	119
24	On the Need of Improved Accelerated Degradation Protocols (ADPs): Examination of Platinum Dissolution and Carbon Corrosion in Half-Cell Tests. <i>Journal of the Electrochemical Society</i> , 2016, 163, F1510-F1514.	2.9	112
25	Investigation of the Oxygen Reduction Activity on Silver – A Rotating Disc Electrode Study. <i>Fuel Cells</i> , 2010, 10, 575-581.	2.4	99
26	Identical-location TEM investigations of Pt/C electrocatalyst degradation at elevated temperatures. <i>Journal of Electroanalytical Chemistry</i> , 2011, 662, 355-360.	3.8	98
27	Probing Degradation by IL-TEM: The Influence of Stress Test Conditions on the Degradation Mechanism. <i>Journal of the Electrochemical Society</i> , 2013, 160, F608-F615.	2.9	96
28	Surface Electrochemistry of CO on Reconstructed Gold Single Crystal Surfaces Studied by Infrared Reflection Absorption Spectroscopy and Rotating Disk Electrode. <i>Journal of the American Chemical Society</i> , 2004, 126, 10130-10141.	13.7	93
29	Size-selected clusters as heterogeneous model catalysts under applied reaction conditions. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 10288.	2.8	81
30	Oxygen Reduction Reaction on Pt Overlayers Deposited onto a Gold Film: Ligand, Strain, and Ensemble Effect. <i>ACS Catalysis</i> , 2016, 6, 671-676.	11.2	79
31	Temperature Dependent CO Oxidation Mechanisms on Size-Selected Clusters. <i>Journal of Physical Chemistry C</i> , 2010, 114, 1651-1654.	3.1	76
32	CO adsorption and kinetics on well-characterized Pd films on Pt() in alkaline solutions. <i>Surface Science</i> , 2002, 506, 287-296.	1.9	71
33	In situ CO oxidation on well characterized Pt ₃ Sn(hkl) surfaces: A selective review. <i>Surface Science</i> , 2005, 576, 145-157.	1.9	71
34	The effect of specific chloride adsorption on the electrochemical behavior of ultrathin Pd films deposited on Pt() in acid solution. <i>Surface Science</i> , 2003, 523, 199-209.	1.9	70
35	The Oxygen Reduction Reaction on Thin Palladium Films Supported on a Pt(111) Electrode. <i>Journal of Physical Chemistry B</i> , 2003, 107, 9813-9819.	2.6	70
36	The particle proximity effect: from model to high surface area fuel cell catalysts. <i>RSC Advances</i> , 2014, 4, 14971.	3.6	70

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37	Investigating the corrosion of high surface area carbons during start/stop fuel cell conditions: A Raman study. <i>Electrochimica Acta</i> , 2013, 114, 455-461.	5.2	65
38	Pt based PEMFC catalysts prepared from colloidal particle suspensions – a toolbox for model studies. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 3602.	2.8	64
39	Surface Chemistry of “Unprotected” Nanoparticles: A Spectroscopic Investigation on Colloidal Particles. <i>Journal of Physical Chemistry C</i> , 2015, 119, 17655-17661.	3.1	64
40	Analysis of the Impact of Individual Glass Constituents on Electrocatalysis on Pt Electrodes in Alkaline Solution. <i>Journal of the Electrochemical Society</i> , 2008, 155, P78.	2.9	63
41	Log on for new catalysts. <i>Nature Chemistry</i> , 2009, 1, 518-519.	13.6	62
42	Fuel cell catalyst degradation: Identical location electron microscopy and related methods. <i>Nano Energy</i> , 2016, 29, 299-313.	16.0	62
43	Ir nanoparticles with ultrahigh dispersion as oxygen evolution reaction (OER) catalysts: synthesis and activity benchmarking. <i>Catalysis Science and Technology</i> , 2019, 9, 6345-6356.	4.1	61
44	Bayesian Optimization of High-Entropy Alloy Compositions for Electrocatalytic Oxygen Reduction**. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 24144-24152.	13.8	61
45	Electrochemically induced nanocluster migration. <i>Electrochimica Acta</i> , 2010, 56, 810-816.	5.2	59
46	Benchmarking Fuel Cell Electrocatalysts Using Gas Diffusion Electrodes: Inter-lab Comparison and Best Practices. <i>ACS Energy Letters</i> , 2022, 7, 816-826.	17.4	58
47	On the influence of the Pt to carbon ratio on the degradation of high surface area carbon supported PEM fuel cell electrocatalysts. <i>Electrochemistry Communications</i> , 2013, 34, 153-156.	4.7	57
48	Surface (electro-)chemistry on Pt(111) modified by a Pseudomorphic Pd monolayer. <i>Surface Science</i> , 2004, 573, 57-66.	1.9	56
49	Environment Matters: CO ₂ RR Electrocatalyst Performance Testing in a Gas-Fed Zero-Gap Electrolyzer. <i>ACS Catalysis</i> , 2020, 10, 13096-13108.	11.2	55
50	Colloids for Catalysts: A Concept for the Preparation of Superior Catalysts of Industrial Relevance. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 12338-12341.	13.8	53
51	Enhanced Oxygen Reduction Activity by Selective Anion Adsorption on Non-Precious-Metal Catalysts. <i>ACS Catalysis</i> , 2018, 8, 7104-7112.	11.2	53
52	Cluster Chemistry: % Size-Dependent Reactivity Induced by Reverse Spill-Over. <i>Journal of the American Chemical Society</i> , 2007, 129, 9635-9639.	13.7	52
53	pH matters: The influence of the catalyst ink on the oxygen reduction activity determined in thin film rotating disk electrode measurements. <i>Journal of Power Sources</i> , 2017, 353, 19-27.	7.8	51
54	AuPt core-shell nanocatalysts with bulk Pt activity. <i>Electrochemistry Communications</i> , 2010, 12, 1487-1489.	4.7	50

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55	Comparative DEMS study on the electrochemical oxidation of carbon blacks. <i>Journal of Power Sources</i> , 2012, 217, 392-399.	7.8	50
56	The Gas Diffusion Electrode Setup as Straightforward Testing Device for Proton Exchange Membrane Water Electrolyzer Catalysts. <i>Jacs Au</i> , 2021, 1, 247-251.	7.9	50
57	Bifunctional Pt-IrO ₂ Catalysts for the Oxygen Evolution and Oxygen Reduction Reactions: Alloy Nanoparticles versus Nanocomposite Catalysts. <i>ACS Catalysis</i> , 2021, 11, 820-828.	11.2	50
58	Sulfate adsorption on Cu(111) studied by in-situ IRRAS and STM: revealing the adsorption site and desorption behavior. <i>Surface Science</i> , 1999, 442, 215-222.	1.9	49
59	The Oxygen Reduction Reaction on Pt: Why Particle Size and Interparticle Distance Matter. <i>ACS Catalysis</i> , 2021, 11, 7144-7153.	11.2	49
60	A DEMS study on the electrochemical oxidation of a high surface area carbon black. <i>Electrochemistry Communications</i> , 2011, 13, 1473-1473.	4.7	48
61	Particle Size Effect on Platinum Dissolution: Practical Considerations for Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 25718-25727.	8.0	48
62	Comparative IL-TEM Study Concerning the Degradation of Carbon Supported Pt-Based Electrocatalysts. <i>Journal of the Electrochemical Society</i> , 2012, 159, B677-B682.	2.9	46
63	Self-supported nanostructured iridium-based networks as highly active electrocatalysts for oxygen evolution in acidic media. <i>Journal of Materials Chemistry A</i> , 2020, 8, 1066-1071.	10.3	43
64	Core-shell TiO ₂ @C: towards alternative supports as replacement for high surface area carbon for PEMFC catalysts. <i>Electrochimica Acta</i> , 2014, 139, 21-28.	5.2	39
65	On the structural composition and stability of Fe-N-C catalysts prepared by an intermediate acid leaching. <i>Journal of Solid State Electrochemistry</i> , 2016, 20, 969-981.	2.5	39
66	Nanoparticles in a box: a concept to isolate, store and re-use colloidal surfactant-free precious metal nanoparticles. <i>Journal of Materials Chemistry A</i> , 2017, 5, 6140-6145.	10.3	37
67	Gas diffusion electrode setup for catalyst testing in concentrated phosphoric acid at elevated temperatures. <i>Review of Scientific Instruments</i> , 2015, 86, 024102.	1.3	33
68	Single Graphene Layer on Pt(111) Creates Confined Electrochemical Environment via Selective Ion Transport. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 12883-12887.	13.8	32
69	Enhanced Oxygen Reduction Reaction on Fe/N/C Catalyst in Acetate Buffer Electrolyte. <i>ACS Catalysis</i> , 2019, 9, 3082-3089.	11.2	32
70	The Dissolution Dilemma for Low Pt Loading Polymer Electrolyte Membrane Fuel Cell Catalysts. <i>Journal of the Electrochemical Society</i> , 2020, 167, 164501.	2.9	32
71	Synthesis of Iridium Nanocatalysts for Water Oxidation in Acid: Effect of the Surfactant. <i>ChemCatChem</i> , 2020, 12, 1282-1287.	3.7	31
72	UV-Induced Synthesis and Stabilization of Surfactant-Free Colloidal Pt Nanoparticles with Controlled Particle Size in Ethylene Glycol. <i>ChemNanoMat</i> , 2017, 3, 89-93.	2.8	30

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73	Monovalent Alkali Cations: Simple and Eco-Friendly Stabilizers for Surfactant-Free Precious Metal Nanoparticle Colloids. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 13680-13686.	6.7	29
74	Testing fuel cell catalysts under more realistic reaction conditions: accelerated stress tests in a gas diffusion electrode setup. <i>JPhys Energy</i> , 2020, 2, 024003.	5.3	29
75	A New Approach to Probe the Degradation of Fuel Cell Catalysts under Realistic Conditions: Combining Tests in a Gas Diffusion Electrode Setup with Small Angle X-ray Scattering. <i>Journal of the Electrochemical Society</i> , 2020, 167, 134515.	2.9	29
76	Dual pulsed-beam controlled mole fraction studies of the catalytic oxidation of CO on supported Pd nanocatalysts. <i>Journal of Catalysis</i> , 2008, 255, 234-240.	6.2	27
77	The influence of electrochemical annealing in CO saturated solution on the catalytic activity of Pt nanoparticles. <i>Electrochimica Acta</i> , 2009, 54, 5018-5022.	5.2	27
78	Investigating the activity enhancement on Pt _x Co _{1-x} alloys induced by a combined strain and ligand effect. <i>Journal of Power Sources</i> , 2014, 245, 908-914.	7.8	27
79	Controlled Synthesis of Surfactant-Free Water-Dispersible Colloidal Platinum Nanoparticles by the Co4Cat Process. <i>ChemSusChem</i> , 2019, 12, 1229-1239.	6.8	27
80	Sputtered Platinum Thin-films for Oxygen Reduction in Gas Diffusion Electrodes: A Model System for Studies under Realistic Reaction Conditions. <i>Surfaces</i> , 2019, 2, 336-348.	2.3	27
81	Solvent-Dependent Growth and Stabilization Mechanisms of Surfactant-Free Colloidal Pt Nanoparticles. <i>Chemistry - A European Journal</i> , 2020, 26, 9012-9023.	3.3	26
82	Stabilizing Catalytically Active Nanoparticles by Ligand Linking: Toward Three-Dimensional Networks with High Catalytic Surface Area. <i>Langmuir</i> , 2014, 30, 5564-5573.	3.5	25
83	Electrochemical Stability and Postmortem Studies of Pt/SiC Catalysts for Polymer Electrolyte Membrane Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 6153-6161.	8.0	25
84	Tetrahexahedral Pt Nanoparticles: Comparing the Oxygen Reduction Reaction under Transient vs Steady-State Conditions. <i>ACS Catalysis</i> , 2017, 7, 1-6.	11.2	25
85	In-situ Characterization of Metal/Electrolyte Interfaces: Sulfate Adsorption on Cu(111). <i>Physica Status Solidi A</i> , 2001, 187, 63-74.	1.7	24
86	Preferential oxidation of carbon monoxide adsorbed on Pd submonolayer films deposited on Pt(100). <i>Electrochemistry Communications</i> , 2003, 5, 809-813.	4.7	24
87	From single crystal model catalysts to systematic studies of supported nanoparticles. <i>Surface Science</i> , 2015, 631, 278-284.	1.9	23
88	The colloidal tool-box approach for fuel cell catalysts: Systematic study of perfluorosulfonate-ionomer impregnation and Pt loading. <i>Catalysis Today</i> , 2016, 262, 82-89.	4.4	23
89	Beyond Active Site Design: A Surfactant-Free Toolbox Approach for Optimized Supported Nanoparticle Catalysts. <i>ChemCatChem</i> , 2021, 13, 1692-1705.	3.7	23
90	Opportunities and Knowledge Gaps of SO ₂ Electrocatalytic Oxidation for H ₂ Electrochemical Generation. <i>ACS Catalysis</i> , 2019, 9, 8136-8143.	11.2	22

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91	Bayesian Optimization of High-Entropy Alloy Compositions for Electrocatalytic Oxygen Reduction**. <i>Angewandte Chemie</i> , 2021, 133, 24346-24354.	2.0	22
92	Equilibrium coverage of OH ad in correlation with platinum catalyzed fuel cell reactions in HClO 4. <i>Electrochemistry Communications</i> , 2015, 53, 41-44.	4.7	21
93	On the oxygen reduction reaction in phosphoric acid electrolyte: Evidence of significantly increased inhibition at steady state conditions. <i>Electrochimica Acta</i> , 2016, 204, 78-83.	5.2	21
94	Accessing the Inaccessible: Analyzing the Oxygen Reduction Reaction in the Diffusion Limit. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 38176-38180.	8.0	21
95	Establishing the potential dependent equilibrium oxide coverage on platinum in alkaline solution and its influence on the oxygen reduction. <i>Journal of Power Sources</i> , 2012, 217, 262-267.	7.8	20
96	On the Preparation and Testing of Fuel Cell Catalysts Using the Thin Film Rotating Disk Electrode Method. <i>Journal of Visualized Experiments</i> , 2018, , .	0.3	20
97	Teaching old precursors new tricks: Fast room temperature synthesis of surfactant-free colloidal platinum nanoparticles. <i>Journal of Colloid and Interface Science</i> , 2020, 577, 319-328.	9.4	20
98	Cyanide adlayers on Pt(111) in chloride containing electrolytes studied by in situ, ex situ IRAS and LEED. <i>Surface Science</i> , 2000, 461, 98-106.	1.9	19
99	Design and test of a flexible electrochemical setup for measurements in aqueous electrolyte solutions at elevated temperature and pressure. <i>Review of Scientific Instruments</i> , 2014, 85, 085105.	1.3	19
100	In-situ FTIR Spectroscopy: Probing the Electrochemical Interface during the Oxygen Reduction Reaction on a Commercial Platinum High-Surface-Area Catalyst. <i>ChemCatChem</i> , 2016, 8, 1125-1131.	3.7	19
101	Evaluation of temperature and electrolyte concentration dependent Oxygen solubility and diffusivity in phosphoric acid. <i>Electrochimica Acta</i> , 2016, 209, 399-406.	5.2	18
102	Electrochemical stability of subnanometer Pt clusters. <i>Electrochimica Acta</i> , 2018, 277, 211-217.	5.2	18
103	Testing a Silver Nanowire Catalyst for the Selective CO ₂ Reduction in a Gas Diffusion Electrode Half-cell Setup Enabling High Mass Transport Conditions. <i>Chimia</i> , 2019, 73, 922.	0.6	18
104	Carbon-Supported Platinum Electrocatalysts Probed in a Gas Diffusion Setup with Alkaline Environment: How Particle Size and Mesoscopic Environment Influence the Degradation Mechanism. <i>ACS Catalysis</i> , 2020, 10, 13040-13049.	11.2	18
105	Surfactant-free synthesis of size controlled platinum nanoparticles: Insights from in situ studies. <i>Applied Surface Science</i> , 2021, 549, 149263.	6.1	18
106	Halide-Induced Leaching of Pt Nanoparticles – Manipulation of Particle Size by Controlled Ostwald Ripening. <i>ChemNanoMat</i> , 2019, 5, 462-471.	2.8	17
107	Electrochemical Reduction of CO ₂ on Au Electrocatalysts in a Zero-Gap, Half-Cell Gas Diffusion Electrode Setup: a Systematic Performance Evaluation and Comparison to an H-cell Setup**. <i>ChemElectroChem</i> , 2022, 9, .	3.4	17
108	Temperature-Induced Deposition Method for Anchoring Metallic Nanoparticles onto Reflective Substrates for in Situ Electrochemical Infrared Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2004, 108, 17915-17920.	2.6	16

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109	On the influence of hydronium and hydroxide ion diffusion on the hydrogen and oxygen evolution reactions in aqueous media. <i>Electrochimica Acta</i> , 2015, 158, 13-17.	5.2	16
110	On the electrooxidation of glucose on gold: Towards an electrochemical glucaric acid production as value-added chemical. <i>Electrochimica Acta</i> , 2022, 410, 140023.	5.2	16
111	Chapter 1 Size effects in the chemistry of small clusters. <i>Chemical Physics of Solid Surfaces</i> , 2007, , 1-51.	0.3	15
112	Activity inhibition and its mitigation in high temperature proton exchange membrane fuel cells: The role of phosphoric acid, ammonium trifluoromethanesulfonate, and polyvinylidene difluoride. <i>Journal of Power Sources</i> , 2014, 272, 1072-1077.	7.8	15
113	Synthesis Mechanism and Influence of Light on Unprotected Platinum Nanoparticles Synthesis at Room Temperature. <i>ChemNanoMat</i> , 2016, 2, 104-107.	2.8	15
114	[Mo ₃ S ₁₃] ²⁻ Cluster Decorated Sulfur-doped Reduced Graphene Oxide as Noble Metal-free Catalyst for Hydrogen Evolution Reaction in Polymer Electrolyte Membrane Electrolyzers. <i>ChemElectroChem</i> , 2018, 5, 2672-2680.	3.4	15
115	Electrochemically Generated Copper Carbonyl for Selective Dimethyl Carbonate Synthesis. <i>ACS Catalysis</i> , 2019, 9, 859-866.	11.2	15
116	UV-induced syntheses of surfactant-free precious metal nanoparticles in alkaline methanol and ethanol. <i>Nanoscale Advances</i> , 2020, 2, 2288-2292.	4.6	15
117	Tracking the Catalyst Layer Depth-Dependent Electrochemical Degradation of a Bimodal Pt/C Fuel Cell Catalyst: A Combined <i>Operando</i> Small- and Wide-Angle X-ray Scattering Study. <i>ACS Catalysis</i> , 2022, 12, 2077-2085.	11.2	15
118	Structural disordering of de-alloyed Pt bimetallic nanocatalysts: the effect on oxygen reduction reaction activity and stability. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 28044-28053.	2.8	14
119	Surfactant-free colloidal strategies for highly dispersed and active supported IrO ₂ catalysts: Synthesis and performance evaluation for the oxygen evolution reaction. <i>Journal of Catalysis</i> , 2021, 401, 54-62.	6.2	14
120	Spatially Localized Synthesis and Structural Characterization of Platinum Nanocrystals Obtained Using UV Light. <i>ACS Omega</i> , 2018, 3, 10351-10356.	3.5	13
121	Kinetics, Assembling, and Conformation Control of L-cysteine Adsorption on Pt Investigated by in situ FTIR Spectroscopy and QCM. <i>ChemPhysChem</i> , 2018, 19, 2340-2348.	2.1	13
122	Micromechanical sensor for studying heats of surface reactions, adsorption, and cluster deposition processes. <i>Review of Scientific Instruments</i> , 2007, 78, 054101.	1.3	12
123	1-Naphthylamine functionalized Pt nanoparticles: electrochemical activity and redox chemistry occurring on one surface. <i>New Journal of Chemistry</i> , 2015, 39, 2557-2564.	2.8	12
124	On the influence of hydronium and hydroxide ion diffusion on the hydrogen and oxygen evolution reactions in aqueous media. <i>Electrochimica Acta</i> , 2015, 159, 66-70.	5.2	12
125	Colloids for Catalysts: A Concept for the Preparation of Superior Catalysts of Industrial Relevance. <i>Angewandte Chemie</i> , 2018, 130, 12518-12521.	2.0	12
126	Support-free nanostructured Pt Cu electrocatalyst for the oxygen reduction reaction prepared by alternating magnetron sputtering. <i>Journal of Power Sources</i> , 2019, 413, 432-440.	7.8	12

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127	Gold nanoparticles assembled with dithiocarbamate-anchored molecular wires. <i>Scientific Reports</i> , 2015, 5, 15273.	3.3	11
128	Influence of the Electrode and Chaotropicity of the Electrolyte on the Oscillatory Behavior of the Electrocatalytic Oxidation of SO ₂ . <i>Journal of Physical Chemistry C</i> , 2018, 122, 1243-1247.	3.1	11
129	Accelerated Durability Test for High-Surface-Area Oxyhydroxide Nickel Supported on Raney Nickel as Catalyst for the Alkaline Oxygen Evolution Reaction. <i>ChemPhysChem</i> , 2019, 20, 3147-3153.	2.1	11
130	Examining the Structure Sensitivity of the Oxygen Evolution Reaction on Pt Single-Crystal Electrodes: A Combined Experimental and Theoretical Study. <i>ChemPhysChem</i> , 2019, 20, 3154-3162.	2.1	11
131	Insights from <i>In Situ</i> Studies on the Early Stages of Platinum Nanoparticle Formation. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 3224-3231.	4.6	11
132	Elucidating Pt-Based Nanocomposite Catalysts for the Oxygen Reduction Reaction in Rotating Disk Electrode and Gas Diffusion Electrode Measurements. <i>ACS Catalysis</i> , 2021, 11, 7584-7594.	11.2	11
133	The polymerization of acetylene on supported metal clusters. <i>Low Temperature Physics</i> , 2006, 32, 1097-1103.	0.6	10
134	Design, development, and demonstration of a fully LabVIEW controlled <i>in situ</i> electrochemical Fourier transform infrared setup combined with a wall-jet electrode to investigate the electrochemical interface of nanoparticulate electrocatalysts under reaction conditions. <i>Review of Scientific Instruments</i> , 2013, 84, 074103.	1.3	10
135	Monodispersed cluster-assembled materials. <i>Materials Today</i> , 2006, 9, 48-49.	14.2	9
136	Comparative study of cytotoxicity by platinum nanoparticles and ions in vitro systems based on fish cell lines. <i>Toxicology in Vitro</i> , 2020, 66, 104859.	2.4	9
137	Structural Changes of Au(111) Single-Crystal Electrode Surface in Ionic Liquids. <i>ChemElectroChem</i> , 2020, 7, 501-508.	3.4	8
138	Influence of Anion Chaotropicity on the SO ₂ Oxidation Reaction: When Spectator Species Determine the Reaction Pathway. <i>ChemElectroChem</i> , 2020, 7, 1843-1850.	3.4	8
139	Commercial Spirits for Surfactant-Free Syntheses of Electro-Active Platinum Nanoparticles. <i>Sustainable Chemistry</i> , 2021, 2, 1-7.	4.7	8
140	Pt _x Co _{1-x} alloy NPs prepared by colloidal tool-box synthesis: The effect of de-alloying on the oxygen reduction reaction activity. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 9143-9148.	7.1	7
141	Size effect studies in catalysis: a simple surfactant-free synthesis of sub 3 nm Pd nanocatalysts supported on carbon. <i>RSC Advances</i> , 2018, 8, 33794-33797.	3.6	7
142	Mechanism of Electrochemical Cysteine Oxidation on Pt. <i>ChemElectroChem</i> , 2019, 6, 1009-1013.	3.4	7
143	Surfactant-free Ir nanoparticles synthesized in ethanol: Catalysts for the oxygen evolution reaction. <i>Materials Letters</i> , 2022, 308, 131209.	2.6	7
144	Catalyst design criteria and fundamental limitations in the electrochemical synthesis of dimethyl carbonate. <i>Green Chemistry</i> , 2019, 21, 6200-6209.	9.0	6

#	ARTICLE	IF	CITATIONS
145	Operando SAXS study of a Pt/C fuel cell catalyst with an X-ray laboratory source. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 294004.	2.8	6
146	Anion Dependent Particle Size Control of Platinum Nanoparticles Synthesized in Ethylene Glycol. <i>Nanomaterials</i> , 2021, 11, 2092.	4.1	6
147	The gas diffusion electrode setup as a testing platform for evaluating fuel cell catalysts: A comparative RDE&GDE study. <i>Electrochemical Science Advances</i> , 2023, 3, .	2.8	6
148	Catalyst Development for Water/CO2 Co-electrolysis. <i>Chimia</i> , 2019, 73, 707.	0.6	5
149	On the electro-oxidation of small organic molecules: Towards a fuel cell catalyst testing platform based on gas diffusion electrode setups. <i>Journal of Power Sources</i> , 2022, 522, 230979.	7.8	5
150	Influence of the Electrolyte on the Particle Size Effect of the Oxygen Reduction Reaction on Pt Nanoparticles. <i>ECS Transactions</i> , 2009, 25, 455-462.	0.5	4
151	(Invited) The Toolbox Concept for the Synthesis of Surfactant-Free Colloidal Nanoparticles as Electrocatalysts. <i>ECS Transactions</i> , 2020, 97, 443-455.	0.5	4
152	The colloidal tool-box approach for fuel cell catalysts: utilizing graphitized carbon supports. <i>Electrochimica Acta</i> , 2016, 197, 221-227.	5.2	3
153	Oxygen Reduction Reaction on Polycrystalline Platinum: On the Activity Enhancing Effect of Polyvinylidene Difluoride. <i>Surfaces</i> , 2019, 2, 69-77.	2.3	3
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155	On the facile and accurate determination of the Pt content in standard carbon supported Pt fuel cell catalysts. <i>Analytica Chimica Acta</i> , 2020, 1101, 41-49.	5.4	3
156	L-cysteine oxidation on Pt and Au rotating disk electrodes: Insights on mixed controlled kinetics. <i>Journal of Electroanalytical Chemistry</i> , 2021, 880, 114920.	3.8	3
157	Comparative Study of the Degradation of Different Carbon Supported Pt Fuel Cell Catalysts. <i>ECS Transactions</i> , 2011, 41, 811-816.	0.5	2
158	NanoElectrocatalysis: From Basic Research to Applications in Energy Conversion. <i>Chimia</i> , 2018, 72, 276-285.	0.6	2
159	Stability of Pt Alloy High Surface Area Catalysts. <i>ECS Transactions</i> , 2009, 25, 555-563.	0.5	1
160	Design and Application of External Reference Electrode for Kinetic Studies at Elevated Temperatures and Pressures. <i>Journal of the Electrochemical Society</i> , 2017, 164, F821-F824.	2.9	1
161	Single Graphene Layer on Pt(111) Creates Confined Electrochemical Environment via Selective Ion Transport. <i>Angewandte Chemie</i> , 2017, 129, 13063-13067.	2.0	1
162	Particle Size Effect Vs. Particle Proximity Effect: Systematic Study on ORR Activity of High Surface Area Pt/C Catalysts for Polymer Electrolyte Membrane Fuel Cells. <i>ECS Meeting Abstracts</i> , 2018, , .	0.0	0

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163	PEMFC Catalyst Testing: From RDE to GDE Setup. ECS Meeting Abstracts, 2019, , .	0.0	0
164	The Interparticle Distance Effect on Transient Platinum Dissolution: Degradation at High and Low Loadings. ECS Meeting Abstracts, 2019, , .	0.0	0
165	(Invited) The Tool-Box Concept for the Synthesis of Surfactant-Free Colloidal Nanoparticles As Electrocatalysts. ECS Meeting Abstracts, 2020, MA2020-01, 1140-1140.	0.0	0
166	Electrochemical Reduction of CO ₂ on Au Electrocatalysts Under Commercially Relevant Condition. ECS Meeting Abstracts, 2021, MA2021-02, 1727-1727.	0.0	0
167	(Digital Presentation) Small Angle X-Ray Scattering Studies Investigating the Degradation of Electrocatalysts. ECS Meeting Abstracts, 2022, MA2022-01, 1169-1169.	0.0	0
168	(Digital Presentation) Improved Nanocatalysts, Supported IrO _x and IrRuO _x , for Enhanced Oxygen Evolution Reaction. ECS Meeting Abstracts, 2022, MA2022-01, 2327-2327.	0.0	0