MarÃ-a Escudero Escribano

List of Publications by Year
in descending order

73 papers	4,614 citations	172207 29 h-index	106150 65 g-index
77 all docs	77 docs citations	77 times ranked	5783 citing authors

#	Article	IF	Citations
1	Enabling direct H2O2 production through rational electrocatalyst design. Nature Materials, 2013, 12, 1137-1143.	13.3	1,031
2	Tuning the activity of Pt alloy electrocatalysts by means of the lanthanide contraction. Science, 2016, 352, 73-76.	6.0	783
3	Enhanced electrocatalysis of the oxygen reduction reaction based on patterning of platinum surfaces with cyanide. Nature Chemistry, 2010, 2, 880-885.	6.6	284
4	Pt₅Gd as a Highly Active and Stable Catalyst for Oxygen Electroreduction. Journal of the American Chemical Society, 2012, 134, 16476-16479.	6.6	234
5	Cyclic Voltammetry, FTIRS, and DEMS Study of the Electrooxidation of Carbon Monoxide, Formic Acid, and Methanol on Cyanide-Modified Pt(111) Electrodes. Langmuir, 2009, 25, 6500-6507.	1.6	149
6	Benchmarking high surface area electrocatalysts in a gas diffusion electrode: measurement of oxygen reduction activities under realistic conditions. Energy and Environmental Science, 2018, 11, 988-994.	15.6	147
7	Self-supported Ptâ€“CoO networks combining high specific activity with high surface area for oxygen reduction. Nature Materials, 2021, 20, 208-213.	13.3	139
8	Coreâ€“Shell Au@Metal-Oxide Nanoparticle Electrocatalysts for Enhanced Oxygen Evolution. Nano Letters, 2017, 17, 6040-6046.	4.5	135
9	Enhanced activity and stability of Ptâ€“La and Ptâ€“Ce alloys for oxygen electroreduction: the elucidation of the active surface phase. Journal of Materials Chemistry A, 2014, 2, 4234.	5.2	105
10	Importance of Surface IrO_{<i>x</i>}in Stabilizing RuO₂for Oxygen Evolution. Journal of Physical Chemistry B, 2018, 122, 947-955.	1.2	95
11	Benchmarking Pt-based electrocatalysts for low temperature fuel cell reactions with the rotating disk electrode: oxygen reduction and hydrogen oxidation in the presence of CO (review article). Electrochimica Acta, 2015, 179, 647-657.	2.6	86
12	The enhanced activity of mass-selected Pt Gd nanoparticles for oxygen electroreduction. Journal of Catalysis, 2015, 328, 297-307.	3.1	83
13	Elucidation of the Oxygen Reduction Volcano in Alkaline Media using a Copperâ€“Platinum(111) Alloy. Angewandte Chemie - International Edition, 2018, 57, 2800-2805.	7.2	72
14	Electrooxidation of formic acid on gold: An ATR-SEIRAS study of the role of adsorbed formate. Catalysis Today, 2013, 202, 79-86.	2.2	62
15	Structureâ€Sensitivity and Electrolyte Effects in CO₂ Electroreduction: From Model Studies to Applications. ChemCatChem, 2019, 11, 3626-3645.	1.8	61
16	Recent advances in bimetallic electrocatalysts for oxygen reduction: design principles, structure-function relations and active phase elucidation. Current Opinion in Electrochemistry, 2018, 8, 135-146.	2.5	60
17	<i>Operando</i> XAS Study of the Surface Oxidation State on a Monolayer IrO_{<i>x</i>} on RuO_{<i>x</i>} and Ru Oxide Based Nanoparticles for Oxygen Evolution in Acidic Media. Journal of Physical Chemistry B, 2018, 122, 878-887.	1.2	59
18	Benchmarking Fuel Cell Electrocatalysts Using Gas Diffusion Electrodes: Inter-lab Comparison and Best Practices. ACS Energy Letters, 2022, 7, 816-826.	8.8	58

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19	Insights in the Oxygen Reduction Reaction: From Metallic Electrocatalysts to Diporphyrins. ACS Catalysis, 2020, 10, 5979-5989.	5.5	52
20	Electrochemical and FTIRS characterisation of NO adlayers on cyanide-modified Pt(111) electrodes: the mechanism of nitric oxide electroreduction on Pt. Physical Chemistry Chemical Physics, 2008, 10, 3628.	1.3	50
21	Probing the nanoscale structure of the catalytically active overlayer on Pt alloys with rare earths. Nano Energy, 2016, 29, 249-260.	8.2	49
22	Ab Initio Cyclic Voltammetry on Cu(111), Cu(100) and Cu(110) in Acidic, Neutral and Alkaline Solutions. ChemPhysChem, 2019, 20, 3096-3105.	1.0	48
23	Electrolyte Effects on the Electrocatalytic Performance of Iridiumâ€Based Nanoparticles for Oxygen Evolution in Rotating Disc Electrodes. ChemPhysChem, 2019, 20, 2956-2963.	1.0	44
24	Self-supported nanostructured iridium-based networks as highly active electrocatalysts for oxygen evolution in acidic media. Journal of Materials Chemistry A, 2020, 8, 1066-1071.	5.2	43
25	Quantitative Study of Nonâ€Covalent Interactions at the Electrodeâ€"Electrolyte Interface Using Cyanideâ€Modified Pt(111) Electrodes. ChemPhysChem, 2011, 12, 2230-2234.	1.0	40
26	Copper Silver Thin Films with Metastable Miscibility for Oxygen Reduction Electrocatalysis in Alkaline Electrolytes. ACS Applied Energy Materials, 2018, 1, 1990-1999.	2.5	40
27	High Specific and Mass Activity for the Oxygen Reduction Reaction for Thin Film Catalysts of Sputtered Pt₃Y. Advanced Materials Interfaces, 2017, 4, 1700311.	1.9	39
28	Benchmarking Pt and Pt-lanthanide sputtered thin films for oxygen electroreduction: fabrication and rotating disk electrode measurements. Electrochimica Acta, 2017, 247, 708-721.	2.6	39
29	Synthesis of Iridium Nanocatalysts for Water Oxidation in Acid: Effect of the Surfactant. ChemCatChem, 2020, 12, 1282-1287.	1.8	31
30	Towards the elucidation of the high oxygen electroreduction activity of Pt_xY: surface science and electrochemical studies of Y/Pt(111). Physical Chemistry Chemical Physics, 2014, 16, 13718-13725.	1.3	27
31	Sputtered Platinum Thin-films for Oxygen Reduction in Gas Diffusion Electrodes: A Model System for Studies under Realistic Reaction Conditions. Surfaces, 2019, 2, 336-348.	1.0	27
32	Electrochemical STM study of the adsorption of adenine on Au(111) electrodes. Electrochemistry Communications, 2013, 35, 61-64.	2.3	26
33	Surface characterization of copper electrocatalysts by lead underpotential deposition. Journal of Electroanalytical Chemistry, 2021, 896, 115446.	1.9	25
34	Toward understanding the role of the electric double layer structure and electrolyte effects on well-defined interfaces for electrocatalysis. Current Opinion in Electrochemistry, 2022, 32, 100918.	2.5	25
35	Elucidating the Structure of the Cu-Alkaline Electrochemical Interface with the Laser-Induced Temperature Jump Method. Journal of Physical Chemistry C, 2020, 124, 23253-23259.	1.5	24
36	New Platinum Alloy Catalysts for Oxygen Electroreduction Based on Alkaline Earth Metals. Electrocatalysis, 2017, 8, 594-604.	1.5	23

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37	pH and Anion Effects on Cuâ€“Phosphate Interfaces for CO Electroreduction. ACS Catalysis, 2021, 11, 1128-1135.	5.5	22
38	Strategies towardÂthe sustainable electrochemical oxidation of methane to methanol. Current Opinion in Green and Sustainable Chemistry, 2021, 30, 100489.	3.2	21
39	Cyanide-modified Pt(111): Structure, stability and hydrogen adsorption. Electrochimica Acta, 2012, 82, 524-533.	2.6	20
40	Addressing the Interfacial Properties for CO Electroreduction on Cu with Cyclic Voltammetry. ACS Energy Letters, 2020, 5, 130-135.	8.8	19
41	Tailored electrocatalysts by controlled electrochemical deposition and surface nanostructuring. Chemical Communications, 2020, 56, 13261-13272.	2.2	19
42	Recent advances in surface x-ray diffraction and the potential for determining structure-sensitivity relations in single-crystal electrocatalysis. Current Opinion in Electrochemistry, 2020, 23, 162-173.	2.5	18
43	Realistic Cyclic Voltammograms from <i>Ab Initio</i> Simulations in Alkaline and Acidic Electrolytes. Journal of Physical Chemistry C, 2020, 124, 20055-20065.	1.5	18
44	Activeâ€Phase Formation and Stability of Gd/Pt(111) Electrocatalysts for Oxygen Reduction: An In Situ Grazing Incidence Xâ€Ray Diffraction Study. Chemistry - A European Journal, 2018, 24, 12280-12290.	1.7	17
45	The Role of Electrocatalysis in a Sustainable Future: From Renewable Energy Conversion and Storage to Emerging Reactions. ChemPhysChem, 2019, 20, 2900-2903.	1.0	17
46	Pt Gd alloy formation on Pt(111): Preparation and structural characterization. Surface Science, 2016, 652, 114-122.	0.8	16
47	Electrochemically Generated Copper Carbonyl for Selective Dimethyl Carbonate Synthesis. ACS Catalysis, 2019, 9, 859-866.	5.5	15
48	Recent progress and perspectives on single-atom catalysis. Journal of Materials Chemistry A, 2022, 10, 5670-5672.	5.2	15
49	Elucidation of the Oxygen Reduction Volcano in Alkaline Media using a Copperâ€“Platinum(111) Alloy. Angewandte Chemie, 2018, 130, 2850-2855.	1.6	10
50	Preparation of high surface area Cuâ€Au bimetallic nanostructured materials by coâ€electrodeposition in a deep eutectic solvent. Electrochimica Acta, 2021, 398, 139309.	2.6	9
51	Toward Overcoming the Challenges in the Comparison of Different Pd Nanocatalysts: Case Study of the Ethanol Oxidation Reaction. Inorganics, 2020, 8, 59.	1.2	8
52	Electrochemically Decorated Iridium Electrodes with WS_{3â^'}<i>_x</i> Toward Improved Oxygen Evolution Electrocatalyst Stability in Acidic Electrolytes. Advanced Sustainable Systems, 2021, 5, 2000284.	2.7	8
53	Surface Decoration at the Atomic Scale Using a Molecular Pattern: Copper Adsorption on Cyanide-Modified Pt(111) Electrodes. Journal of Physical Chemistry C, 2009, 113, 12340-12344.	1.5	7
54	Metallization of cyanide-modified Pt(111) electrodes with copper. Journal of Solid State Electrochemistry, 2016, 20, 1087-1094.	1.2	6

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55	Catalyst design criteria and fundamental limitations in the electrochemical synthesis of dimethyl carbonate. Green Chemistry, 2019, 21, 6200-6209.	4.6	6
56	Reactivity with Water and Bulk Ruthenium Redox of Lithium Ruthenate in Basic Solutions. Advanced Functional Materials, 2021, 31, 2002249.	7.8	5
57	Surfactant-free syntheses and pair distribution function analysis of osmium nanoparticles. Beilstein Journal of Nanotechnology, 2022, 13, 230-235.	1.5	5
58	Electrochemical Synthesis of High-Value Chemicals: Detection of Key Reaction Intermediates and Products Combining Gas Chromatographyâ€"Mass Spectrometry and <i>in Situ</i> Infrared Spectroscopy. Journal of Physical Chemistry C, 2019, 123, 12762-12772.	1.5	3
59	X-ray Absorption Spectroscopy Investigation of Platinumâ€"Gadolinium Thin Films with Different Stoichiometry for the Oxygen Reduction Reaction. Catalysts, 2020, 10, 978.	1.6	2
60	Women Scientists at the Forefront of Energy Research: A Virtual Issue, Part 2. ACS Energy Letters, 2020, 5, 623-633.	8.8	2
61	Frontispiece: Elucidation of the Oxygen Reduction Volcano in Alkaline Media using a Copperâ€"Platinum(111) Alloy. Angewandte Chemie - International Edition, 2018, 57, .	7.2	1
62	Energy Spotlight. ACS Energy Letters, 2021, 6, 4413-4415.	8.8	1
63	Fuel Cells: High Specific and Mass Activity for the Oxygen Reduction Reaction for Thin Film Catalysts of Sputtered Pt₃Y (Adv. Mater. Interfaces 13/2017). Advanced Materials Interfaces, 2017, 4, .	1.9	0
64	Frontispiz: Elucidation of the Oxygen Reduction Volcano in Alkaline Media using a Copperâ€"Platinum(111) Alloy. Angewandte Chemie, 2018, 130, .	1.6	0
65	Frontispiece: Active-Phase Formation and Stability of Gd/Pt(111) Electrocatalysts for Oxygen Reduction: An In Situ Grazing Incidence X-Ray Diffraction Study. Chemistry - A European Journal, 2018, 24, .	1.7	0
66	Studies of the Oxygen Reduction Reaction of Pt Single Crystals Alloys in Alkaline Media. ECS Meeting Abstracts, 2018, , .	0.0	0
67	(Energy Technology Division Supramaniam Srinivasan Young Investigator Award Address) Enhanced Oxygen Electrocatalysis By Means of Electronic and Geometric Effects. ECS Meeting Abstracts, 2018, , .	0.0	0
68	PEMFC Catalyst Testing: From RDE to GDE Setup. ECS Meeting Abstracts, 2019, , .	0.0	0
69	Surface Sensitivity and Electrolyte Effects on Cu Single-crystalline Electrodes for CO Electroreduction. , 0, , .		0
70	Surface Sensitivity and Electrolyte Effects on Cu Single-crystalline Electrodes for CO Electroreduction. , 0, , .		0
71	Electrolyte Effects on Single Crystal Cyclic Voltammograms. ECS Meeting Abstracts, 2020, MA2020-02, 3046-3046.	0.0	0
72	Electrocatalytic Synthesis of Dimethyl Carbonate. , 0, , .		0

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73	(Invited) Tailored Electrochemical Interfaces for the Production of Renewable Fuels. ECS Meeting Abstracts, 2022, MA2022-01, 1601-1601.	0.0	0