

Hebe de las Mercedes Villullas

List of Publications by Year in descending order

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40
papers

1,485
citations

304743

22
h-index

315739

38
g-index

40
all docs

40
docs citations

40
times ranked

1988
citing authors

#	ARTICLE	IF	CITATIONS
1	New understandings of ethanol oxidation reaction mechanism on Pd/C and Pd ₂ Ru/C catalysts in alkaline direct ethanol fuel cells. <i>Applied Catalysis B: Environmental</i> , 2018, 224, 602-611.	20.2	132
2	Hydrogen Evolution Reaction on Gold Single-Crystal Electrodes in Acid Solutions. <i>Journal of Physical Chemistry B</i> , 1998, 102, 10931-10935.	2.6	113
3	Carbon-Supported Pt~Co Catalysts Prepared by a Modified Polyol Process as Cathodes for PEM Fuel Cells. <i>Journal of Physical Chemistry C</i> , 2007, 111, 3146-3151.	3.1	111
4	Electrochemical Oxidation of Methanol on Pt Nanoparticles Dispersed on RuO ₂ . <i>Journal of Physical Chemistry B</i> , 2004, 108, 12898-12903.	2.6	91
5	Alloys and oxides on carbon-supported Pt~Sn electrocatalysts for ethanol oxidation. <i>Journal of Power Sources</i> , 2010, 195, 3394-3401.	7.8	90
6	The hanging meniscus rotating disk (HMRD). <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1991, 307, 263-268.	0.1	82
7	Structure sensitivity of oxygen reduction on platinum single crystal electrodes in acid solutions. <i>Journal of Electroanalytical Chemistry</i> , 1997, 435, 179-187.	3.8	80
8	The hanging-meniscus rotating disk (HMRD) Part 1. Dependence of hydrodynamic behavior on experimental variables. <i>Journal of Electroanalytical Chemistry</i> , 1995, 384, 25-30.	3.8	57
9	Effects of Alloyed and Oxide Phases on Methanol Oxidation of Pt~Ru/C Nanocatalysts of the Same Particle Size. <i>Journal of Physical Chemistry C</i> , 2009, 113, 8518-8525.	3.1	56
10	Anodic oxidation of formaldehyde on Pt-modified SnO ₂ thin film electrodes prepared by a sol-gel method. <i>Electrochimica Acta</i> , 2004, 49, 3909-3916.	5.2	55
11	Pd-based catalysts: Influence of the second metal on their stability and oxygen reduction activity. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 17052-17059.	7.1	53
12	The effects of trace anions on the voltammetry of single crystal gold surfaces. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1991, 306, 213-238.	0.1	45
13	A comparative investigation of metal-support interactions on the catalytic activity of Pt nanoparticles for ethanol oxidation in alkaline medium. <i>Journal of Power Sources</i> , 2016, 311, 81-90.	7.8	45
14	Enhancement of ethanol oxidation on Pd nanoparticles supported on carbon-antimony tin oxide hybrids unveils the relevance of electronic effects. <i>Journal of Catalysis</i> , 2017, 348, 1-8.	6.2	45
15	The hanging meniscus rotating disk (HMRD) Part 2. Application to simple charge transfer reaction kinetics. <i>Journal of Electroanalytical Chemistry</i> , 1995, 385, 39-44.	3.8	43
16	Surface structure and electronic properties of Pt~Fe/C nanocatalysts and their relation with catalytic activity for oxygen reduction. <i>Journal of Power Sources</i> , 2010, 195, 3111-3118.	7.8	42
17	The Aerosol OT + n-Butanol + n-Heptane + Water System: Phase Behavior, Structure Characterization, and Application to Pt ₇₀ Fe ₃₀ Nanoparticle Synthesis. <i>Langmuir</i> , 2007, 23, 11015-11020.	3.5	39
18	Well-Alloyed PtFe~C Nanocatalysts of Controlled Composition and Same Particle Size: Oxygen Reduction and Methanol Tolerance. <i>Journal of the Electrochemical Society</i> , 2009, 156, B51.	2.9	39

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19	Influence of Particle Size on the Properties of Pt-Ru-C Catalysts Prepared by a Microemulsion Method. <i>Journal of the Electrochemical Society</i> , 2007, 154, B474.	2.9	36
20	Changes induced by transition metal oxides in Pt nanoparticles unveil the effects of electronic properties on oxygen reduction activity. <i>Journal of Materials Chemistry A</i> , 2019, 7, 2075-2086.	10.3	33
21	Sol-Gel Prepared Pt-Modified Oxide Layers: Synthesis, Characterization, and Electrocatalytic Activity. <i>Chemistry of Materials</i> , 2006, 18, 5563-5570.	6.7	30
22	Dependence on composition of electronic properties and stability of Pt-Fe/C catalysts for oxygen reduction. <i>Journal of Power Sources</i> , 2010, 195, 7255-7258.	7.8	22
23	A General Treatment for the Conductivity of Electrolytes in the Whole Concentration Range in Aqueous and Nonaqueous Solutions. <i>Journal of Physical Chemistry B</i> , 2005, 109, 9166-9173.	2.6	19
24	The Extent on the Nanoscale of Pt-Skin Effects on Oxygen Reduction and Its Influence on Fuel Cell Power. <i>Journal of Physical Chemistry C</i> , 2010, 114, 20267-20271.	3.1	16
25	Enhancement of the hydrogen evolution reaction. Polycrystalline silver in alkaline solutions under potential holding conditions. <i>Electrochimica Acta</i> , 1987, 32, 1657-1659.	5.2	14
26	What Determines Electrochemical Surface Processes on Carbon-Supported PdAu Nanoparticles?. <i>ACS Catalysis</i> , 2018, 8, 1818-1827.	11.2	14
27	Oxygen evolution on platinum modified Ti/RuO ₂ sol-gel films. <i>Journal of Electroanalytical Chemistry</i> , 2003, 545, 89-97.	3.8	13
28	Advancing direct ethanol fuel cell operation at intermediate temperature by combining Nafion-hybrid electrolyte and well-alloyed PtSn/C electrocatalyst. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 13252-13264.	7.1	12
29	Anodic film formation on silver in solutions containing chromate. <i>Electrochimica Acta</i> , 1999, 44, 2843-2851.	5.2	10
30	Oxygen reduction activity and methanol tolerance of carbon-supported PtV nanoparticles and the effects of heat treatment at low temperatures. <i>Journal of Solid State Electrochemistry</i> , 2016, 20, 1119-1129.	2.5	10
31	Potentiodynamic growth of anodic silver chromate layers. <i>Electrochimica Acta</i> , 1999, 44, 4693-4700.	5.2	8
32	An Ellipsometric Study of Manganese Oxide Films. <i>Journal of the Electrochemical Society</i> , 2005, 152, A37.	2.9	8
33	Relevance of Electronic Effects on the Yield of CO ₂ from Methanol Oxidation. <i>Langmuir</i> , 2012, 28, 1064-1067.	3.5	7
34	Oxidation of Ethanol and Its Derivatives on Well Defined Pt Single Crystal Electrodes Vicinal to Pt(111): A Comparative Study. <i>ECS Transactions</i> , 2013, 53, 11-22.	0.5	5
35	The hanging meniscus rotating disk (HMRD) Part 3. Application to a charge transfer preceded by a chemical reaction in equilibrium. <i>Journal of Electroanalytical Chemistry</i> , 1996, 418, 159-165.	3.8	3
36	The hanging meniscus rotating disk part 4. Application to catalytic processes. <i>Journal of Electroanalytical Chemistry</i> , 1997, 437, 255-258.	3.8	3

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37	The effect of metallic impurities on the hydrogen evolution reaction rate on group-1b metals in alkaline solution. <i>Journal of Applied Electrochemistry</i> , 1991, 21, 1027-1030.	2.9	2
38	A novel electrochemical cell for operando X-ray absorption measurements at low energies: Probing electrochemically induced electronic changes in palladium. <i>Electrochemistry Communications</i> , 2018, 94, 14-17.	4.7	2
39	Preparação e caracterização de eletrodos monocristalinos. <i>Quimica Nova</i> , 1997, 20, 555-559.	0.3	0
40	Analysis of Ohmic Effects in Passivation Processes. <i>Materials Science Forum</i> , 1998, 289-292, 829-834.	0.3	0