StÃ¨ve Baranton

List of Publications by Year
in descending order

92 papers	4,640 citations	87888 38 h-index	98798 67 g-index
93 all docs	93 docs citations	93 times ranked	4932 citing authors

#	Article	IF	Citations
1	Electrochemical Derivatization of Carbon Surface by Reduction of in Situ Generated Diazonium Cations. Journal of Physical Chemistry B, 2005, 109, 24401-24410.	2.6	339
2	Electro-oxidation of glycerol at Pd based nano-catalysts for an application in alkaline fuel cells for chemicals and energy cogeneration. Applied Catalysis B: Environmental, 2010, 93, 354-362.	20.2	322
3	Electrochemical Valorisation of Glycerol. ChemSusChem, 2012, 5, 2106-2124.	6.8	248
4	Self-Supported Pd_{<i>x</i>}Bi Catalysts for the Electrooxidation of Glycerol in Alkaline Media. Journal of the American Chemical Society, 2014, 136, 3937-3945.	13.7	247
5	Oxygen reduction reaction in acid medium at iron phthalocyanine dispersed on high surface area carbon substrate: tolerance to methanol, stability and kinetics. Journal of Electroanalytical Chemistry, 2005, 577, 223-234.	3.8	245
6	Enhancement of catalytic properties for glycerol electrooxidation on Pt and Pd nanoparticles induced by Bi surface modification. Applied Catalysis B: Environmental, 2011, 110, 40-49.	20.2	157
7	Electrooxidation of Sodium Borohydride at Pd, Au, and Pd_{<i>x</i>}Au_{1âˆ’<i>x</i>} Carbon-Supported Nanocatalysts. Journal of Physical Chemistry C, 2009, 113, 13369-13376.	3.1	151
8	Clean hydrogen generation through the electrocatalytic oxidation ofÂethanol in a Proton Exchange Membrane Electrolysis Cell (PEMEC): Effect of the nature and structure of the catalytic anode. Journal of Power Sources, 2014, 245, 927-936.	7.8	146
9	Electro-oxidation of CO_{chem} on Pt Nanosurfaces: Solution of the Peak Multiplicity Puzzle. Langmuir, 2012, 28, 3658-3663.	3.5	122
10	Tailoring of RuO2 nanoparticles by microwave assisted â€œInstant methodâ€•for energy storage applications. Journal of Power Sources, 2011, 196, 4044-4053.	7.8	109
11	How does Î±-FePc catalysts dispersed onto high specific surface carbon support work towards oxygen reduction reaction (orr)?. Journal of Electroanalytical Chemistry, 2006, 590, 100-110.	3.8	98
12	In situ generation of diazonium cations in organic electrolyte for electrochemical modification of electrode surface. Electrochimica Acta, 2008, 53, 6961-6967.	5.2	98
13	Selective Electrooxidation of Glycerol Into Value-Added Chemicals: A Short Overview. Frontiers in Chemistry, 2019, 7, 100.	3.6	98
14	Octahedral palladium nanoparticles as excellent hosts for electrochemically adsorbed and absorbed hydrogen. Science Advances, 2017, 3, e1600542.	10.3	92
15	PdAu/C catalysts prepared by plasma sputtering for the electro-oxidation of glycerol. Applied Catalysis B: Environmental, 2011, 107, 372-379.	20.2	88
16	Preparation and characterization of Pt/TiO2 nanotubes catalyst for methanol electro-oxidation. Applied Catalysis B: Environmental, 2011, 106, 609-615.	20.2	87
17	Influence of operational parameters and of catalytic materials on electrical performance of Direct Glycerol Solid Alkaline Membrane Fuel Cells. Journal of Power Sources, 2011, 196, 4965-4971.	7.8	83
18	Highly efficient and selective electrooxidation of glucose and xylose in alkaline medium at carbon supported alloyed PdAu nanocatalysts. Applied Catalysis B: Environmental, 2019, 243, 641-656.	20.2	82

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19	Electrochemical conversion of alcohols for hydrogen production: a short overview. Wiley Interdisciplinary Reviews: Energy and Environment, 2016, 5, 388-400.	4.1	80
20	Influence of bismuth on the structure and activity of Pt and Pd nanocatalysts for the direct electrooxidation of NaBH4. Electrochimica Acta, 2010, 56, 580-591.	5.2	67
21	Nickel cobalt hydroxide nanoflakes as catalysts for the hydrogen evolution reaction. Applied Catalysis B: Environmental, 2013, 136-137, 1-8.	20.2	67
22	How do Bi-modified palladium nanoparticles work towards glycerol electrooxidation? An in situ FTIR study. Electrochimica Acta, 2015, 176, 705-717.	5.2	65
23	Selective Electrooxidation of Glycerol to Formic Acid over Carbon Supported Ni_{1â€“<i>x</i>}M_{<i>x</i>}(M = Bi, Pd, and Au) Nanocatalysts and Coelectrolysis of CO₂. ACS Applied Energy Materials, 2020, 3, 8725-8738.	5.1	63
24	Colloidal Syntheses of Shape- and Size-Controlled Pt Nanoparticles for Electrocatalysis. Electrocatalysis, 2012, 3, 75-87.	3.0	62
25	Microwave assisted polyol method for the preparation of Pt/C, Ru/C and PtRu/C nanoparticles and its application in electrooxidation of methanol. Journal of Power Sources, 2012, 214, 33-39.	7.8	62
26	Polyol synthesis of nanosized Pt/C electrocatalysts assisted by pulse microwave activation. Journal of Power Sources, 2011, 196, 920-927.	7.8	61
27	Nano-structured Pd-Sn catalysts for alcohol electro-oxidation in alkaline medium. Electrochemistry Communications, 2015, 57, 48-51.	4.7	61
28	Electrochemical Behavior of Unsupported Shaped Palladium Nanoparticles. Langmuir, 2015, 31, 1605-1609.	3.5	61
29	Development of Bismuthâ€Modified PtPd Nanocatalysts for the Electrochemical Reforming of Polyols into Hydrogen and Valueâ€Added Chemicals. ChemElectroChem, 2016, 3, 1694-1704.	3.4	60
30	Glycerol electrooxidation on self-supported Pd1Snx nanoparticules. Applied Catalysis B: Environmental, 2015, 176-177, 429-435.	20.2	54
31	Preparation and characterization of supported RuxIr(1-x)O2 nano-oxides using a modified polyol synthesis assisted by microwave activation for energy storage applications. Applied Catalysis B: Environmental, 2017, 200, 493-502.	20.2	54
32	A Systematic<i>in Situ</i>Infrared Study of the Electrooxidation of C3 Alcohols on Carbon-Supported Pt and Ptâ€“Bi Catalysts. Journal of Physical Chemistry C, 2016, 120, 7155-7164.	3.1	53
33	Bi-modified palladium nanocubes for glycerol electrooxidation. Electrochemistry Communications, 2013, 34, 335-338.	4.7	50
34	Oxygen reduction reaction at binary and ternary nanocatalysts based on Pt, Pd and Au. Electrochimica Acta, 2015, 182, 131-142.	5.2	48
35	Modification of hydrophobic/hydrophilic properties of Vulcan XC72 carbon powder by grafting of trifluoromethylphenyl and phenylsulfonic acid groups. Carbon, 2010, 48, 2755-2764.	10.3	44
36	High Performance plasma sputtered PdPt fuel cell electrodes with ultra low loading. International Journal of Hydrogen Energy, 2011, 36, 8429-8434.	7.1	44

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37	An FTIR study of Rh-PtSn/C catalysts for ethanol electrooxidation: Effect of surface composition. Applied Catalysis B: Environmental, 2011, 106, 520-528.	20.2	43
38	Alternative cathodes based on iron phthalocyanine catalysts for mini- or micro-DMFC working at room temperature. Electrochimica Acta, 2005, 51, 517-525.	5.2	40
39	Promising ternary Ptâ€“Coâ€“Sn catalyst for the oxygen reduction reaction. Journal of Electroanalytical Chemistry, 2015, 738, 145-153.	3.8	40
40	Synergistic Combination of Plasma Sputtered Pdâ€“Au Bimetallic Nanoparticles for Catalytic Methane Combustion. Journal of Physical Chemistry C, 2011, 115, 11240-11246.	3.1	30
41	Improvement of the Platinum Nanoparticlesâ˘'Carbon Substrate Interaction by Insertion of a Thiophenol Molecular Bridge. Langmuir, 2009, 25, 6543-6550.	3.5	28
42	Insights into the Effects of Functional Groups on Carbon Nanotubes for the Electrooxidation of Methanol. Langmuir, 2011, 27, 9621-9629.	3.5	28
43	Modification of Carbon Substrates by Aryl and Alkynyl Iodonium Salt Reduction. Langmuir, 2010, 26, 15002-15009.	3.5	26
44	Evidence of an Eleyâ€“Rideal Mechanism in the Stripping of a Saturation Layer of Chemisorbed CO on Platinum Nanoparticles. Langmuir, 2012, 28, 13094-13104.	3.5	26
45	Selective Syntheses and Electrochemical Characterization of Platinum Nanocubes and Nanotetrahedrons/Octahedrons. Electrocatalysis, 2010, 1, 3-6.	3.0	25
46	Modification of palladium surfaces by bismuth adatoms or clusters: Effect on electrochemical activity and selectivity towards polyol electrooxidation. International Journal of Hydrogen Energy, 2014, 39, 15877-15886.	7.1	24
47	Efficient amorphous platinum catalyst cluster growth on porous carbon: A combined molecular dynamics and experimental study. Applied Catalysis B: Environmental, 2015, 162, 21-26.	20.2	24
48	Synthesis of Platinum Nanoparticles by Plasma Sputtering onto Glycerol: Effect of Argon Pressure on Their Physicochemical Properties. Journal of Physical Chemistry C, 2021, 125, 3169-3179.	3.1	23
49	Hydrolyzed polyoxymethylenedimethylethers as liquid fuels for direct oxidation fuel cells. Electrochimica Acta, 2013, 108, 350-355.	5.2	22
50	Effect of the annealing atmosphere on the electrochemical properties of RuO2 nano-oxides synthesized by the Instant Method. Applied Catalysis B: Environmental, 2017, 218, 385-397.	20.2	22
51	Remarkably Efficient Carbon-Supported Nanostructured Platinum-Bismuth Catalysts for the Selective Electrooxidation of Glucose and Methyl-Glucoside. Electrocatalysis, 2021, 12, 1-14.	3.0	20
52	Oneâ€step Synthesis and Chemical Characterization of Ptâ€“C Nanowire Composites by Plasma Sputtering. ChemSusChem, 2013, 6, 1168-1171.	6.8	19
53	Changes in COchem oxidative stripping activity induced by reconstruction of Pt (111) and (100) surface nanodomains. Electrochimica Acta, 2013, 92, 438-445.	5.2	19
54	Diffusion of adsorbed CO on platinum (100) and (111) oriented nanosurfaces. Electrochemistry Communications, 2012, 22, 109-112.	4.7	18

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55	A methanol â€“ Tolerant carbon supported Ptâ€“Sn cathode catalysts. International Journal of Hydrogen Energy, 2014, 39, 9070-9079.	7.1	18
56	Fluorine-Free Pt Nanocomposites for Three-Phase Interfaces in Fuel Cell Electrodes. ACS Catalysis, 2016, 6, 6993-7001.	11.2	18
57	Insights on the unique electro-catalytic behavior of PtBi/C materials. Electrochimica Acta, 2020, 329, 135161.	5.2	18
58	Hydrogenotitanates nanotubes supported platinum anode for direct methanol fuel cell. Journal of Power Sources, 2013, 241, 429-439.	7.8	17
59	Green Synthesis and Modification of RuO2 Materials for the Oxygen Evolution Reaction. Frontiers in Energy Research, 2020, 8, .	2.3	17
60	How Stable Are Spherical Platinum Nanoparticles Applied to Fuel Cells?. Journal of Physical Chemistry C, 2018, 122, 11765-11776.	3.1	16
61	The influence of adsorbed substances on alkaline methanol electro-oxidation. Electrochimica Acta, 2019, 295, 278-285.	5.2	15
62	Interfacial structure of atomically flat polycrystalline Pt electrodes and modified Sauerbrey equation. Physical Chemistry Chemical Physics, 2017, 19, 21955-21963.	2.8	13
63	Remarkably Stable Nickel Hydroxide Nanoparticles for Miniaturized Electrochemical Energy Storage. ACS Applied Energy Materials, 2020, 3, 7294-7305.	5.1	13
64	The role of oxygen on the growth of palladium clusters synthesized by gas aggregation source. Plasma Processes and Polymers, 2019, 16, e1900006.	3.0	12
65	Assessment of the beneficial combination of electrochemical and ultrasonic activation of compounds originating from biomass. Ultrasonics Sonochemistry, 2020, 63, 104934.	8.2	11
66	Pt Particles Functionalized on the Molecular Level as New Nanocomposite Materials for Electrocatalysis. Langmuir, 2012, 28, 17832-17840.	3.5	10
67	Chemical Functionalization of Carbon Supported Metal Nanoparticles by Ionic Conductive Polymer via the â€œGrafting Fromâ€•Method. Chemistry of Materials, 2013, 25, 3797-3807.	6.7	10
68	Electrocatalytic behaviour towards oxygen reduction reaction of carbon-supported Pt x M y Au z (M) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	5.2	10
69	Molecular dynamics simulations of initial Pd and PdO nanocluster growth in a magnetron gas aggregation source. Frontiers of Chemical Science and Engineering, 2019, 13, 324-329.	4.4	10
70	The Electrocatalytic Oxidation of Sodium Borohydride at Palladium and Gold Electrodes for an Application to the Direct Borohydride Fuel Cell. ECS Transactions, 2009, 25, 1413-1421.	0.5	9
71	Molecular dynamics simulations of ternary PtxPdyAuz fuel cell nanocatalyst growth. International Journal of Hydrogen Energy, 2016, 41, 22589-22597.	7.1	9
72	Oxidation and Corrosion of Platinumâ€“Nickel and Platinumâ€“Cobalt Nanoparticles in an Aqueous Acidic Medium. ACS Applied Energy Materials, 2019, 2, 7019-7035.	5.1	8

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73	Pd-Shaped Nanoparticles Modified by Gold ad-Atoms: Effects on Surface Structure and Activity Toward Glucose Electrooxidation. Frontiers in Chemistry, 2019, 7, 453.	3.6	8
74	High Performance Plasma Sputtered Fuel Cell Electrodes with Ultra Low Catalytic Metal Loadings. ECS Transactions, 2011, 41, 1151-1159.	0.5	7
75	The potency of Î³-valerolactone as bio-sourced polar aprotic organic medium for the electrocarboxlation of furfural by CO2. Journal of Electroanalytical Chemistry, 2019, 848, 113257.	3.8	7
76	Platinum Activity for CO Electrooxidation: from Single Crystal Surfaces to Nanosurfaces and Real Fuel Cell Nanoparticles. Electrocatalysis, 2012, 3, 304-312.	3.0	6
77	Determination of Reaction Mechanisms Occurring at Fuel Cell Electrocatalysts Using Electrochemical Methods, Spectroelectrochemical Measurements and Analytical Techniques. Modern Aspects of Electrochemistry, 2010, , 397-501.	0.2	6
78	Platinum Fuel Cell Nanoparticle Syntheses: Effect on Morphology, Structure and Electrocatalytic Behavior. , 2012, , .		5
79	Pt₃MeAu (Me = Ni, Cu) Fuel Cell Nanocatalyst Growth, Shapes, and Efficiency: A Molecular Dynamics Simulation Approach. Journal of Physical Chemistry C, 2019, 123, 29656-29664.	3.1	5
80	Electroreforming of Glucose and Xylose in Alkaline Medium at Carbon Supported Alloyed Pd3Au7 Nanocatalysts: Effect of Aldose Concentration and Electrolysis Cell Voltage. Clean Technologies, 2020, 2, 184-203.	4.2	5
81	Binary and ternary Pt-based clusters grown in a plasma multimagnetron-based gas aggregation source: electrocatalytic evaluation towards glycerol oxidation. Nanoscale Advances, 2021, 3, 1730-1740.	4.6	4
82	The Electrocatalytic Oxidation of Ethanol in a Proton Exchange Membrane Electrolysis Cell (PEMEC): A Way to Produce Clean Hydrogen for PEFC. ECS Transactions, 2013, 58, 1907-1921.	0.5	2
83	Electroreforming of Glucose/Xylose Mixtures On PdAu Based Nanocatalysts. ChemElectroChem, 2022, 9, .	3.4	2
84	Conductive Polymer Grafting Platinum Nanoparticles as Efficient Catalysts for the Oxygen Reduction Reaction: Influence of the Polymer Structure. Electrocatalysis, 2018, 9, 640-651.	3.0	1
85	Oxygen Activation for Fuel Cell and Electrochemical Process Applications. , 2014, , 216-250.		0
86	Production of hydrogen by the electrocatalytic oxidation of low-weight compounds (HCOOH, MeOH,) Tj ETQq0 0 0 rgBT /Overlock 10 T		0
87	Production of hydrogen by the electrocatalytic oxidation of compounds derived from the biomass (glycerol, glucose). , 2020, , 81-111.		0
88	(Invited) Highly Active Pt-Modified Catalyst for the Selective Electro-Oxidation of Saccharides. ECS Meeting Abstracts, 2021, MA2021-01, 1917-1917.	0.0	0
89	Physique, Plasmas, MatÃ©riaux et Ã‰nergie : les piles Ã combustible. , 2013, , 22-26.	0.1	0
90	Selective Electro-reforming of Saccharides on Pt9Bi1/C and Effect of Temperature, Concentration and Ultrasonic Irradiations. ECS Meeting Abstracts, 2021, MA2021-02, 1404-1404.	0.0	0

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91	Electro-Oxidation of Oligosaccharides. ECS Meeting Abstracts, 2020, MA2020-02, 2750-2750.	0.0	0
92	Electro-Carboxylation of Furfural By CO2 in Î³-Valerolactone. ECS Meeting Abstracts, 2020, MA2020-02, 3205-3205.	0.0	0