Elizabeth Santos

List of Publications by Year
in descending order

143 papers	3,923 citations	159358 30 h-index	168136 53 g-index
171 all docs	171 docs citations	171 times ranked	3790 citing authors

#	Article	IF	Citations
1	Models of Electron Transfer at Different Electrode Materials. Chemical Reviews, 2022, 122, 10581-10598.	23.0	19
2	Introduction to the special issue: the physics of electrocatalysis. Journal of Physics Condensed Matter, 2022, 34, 290401.	0.7	0
3	On the first step in zinc deposition â€“ A case of nonlinear coupling with the solvent. Electrochemistry Communications, 2021, 122, 106876.	2.3	4
4	Copper Deposition from Chloride-Containing Aqueous Solutions: Catalysis and the Role of the Water Structure. Journal of Physical Chemistry C, 2021, 125, 1811-1818.	1.5	4
5	Die entscheidende Rolle von lokalen Ladungsfluktuationen beim Wachstum von Dendriten auf Lithiumâ€Elektroden. Angewandte Chemie, 2021, 133, 5940-5945.	1.6	6
6	The Crucial Role of Local Excess Charges in Dendrite Growth on Lithium Electrodes. Angewandte Chemie - International Edition, 2021, 60, 5876-5881.	7.2	30
7	Frontispiece: The Crucial Role of Local Excess Charges in Dendrite Growth on Lithium Electrodes. Angewandte Chemie - International Edition, 2021, 60, .	7.2	0
8	Electrochemical adsorption of hydrogen on mixed Pd₂Pt nanostructures. Journal of Physics Condensed Matter, 2021, 33, 344001.	0.7	4
9	Mechanistic Implication of the pH Effect and H/D Kinetic Isotope Effect on HCOOH/HCOO^{â€“} Oxidation at Pt Electrodes: A Study by Computer Simulation. ACS Catalysis, 2021, 11, 6920-6930.	5.5	19
10	ESTIMATION OF THE REAL AREA OF AU NANOPARTICLES OVER HOPG USING ELECTROCHEMICAL TECHNIQUES. Anales De La Asociacion Fisica Argentina, 2021, 32, 48-54.	0.1	0
11	Hydrogen adsorption on doped graphene investigated by a DFT-based tight-binding method. Journal of Physics Condensed Matter, 2021, 33, 504001.	0.7	5
12	Catalysis of hydrogen evolution on Pt(111) by absorbed hydrogen. Journal of Chemical Physics, 2021, 155, 181101.	1.2	4
13	Interactions of ions across carbon nanotubes. Physical Chemistry Chemical Physics, 2020, 22, 10603-10608.	1.3	4
14	Electron transfer at different electrode materials: Metals, semiconductors, and graphene. Current Opinion in Electrochemistry, 2020, 19, 106-112.	2.5	27
15	Role of the Partial Charge Transfer on the Chloride Adlayers on Au(100). ChemElectroChem, 2020, 7, 4269-4282.	1.7	10
16	Interaction between chloride ions mediated by carbon nanotubes: a chemical attraction. Journal of Solid State Electrochemistry, 2020, 24, 3207-3214.	1.2	5
17	Energetics of chloride adlayers on Au(100) electrodes: Grand-canonical Monte Carlo simulations and ab-intio thermodynamics. Electrochimica Acta, 2020, 364, 137289.	2.6	1
18	Reactivity of bimetallic nanostructured electrocatalysts for the hydrogen adsorption. An atomistic view. Surface Science, 2020, 697, 121605.	0.8	7

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19	A model for the effect of ion pairing on an outer sphere electron transfer. Physical Chemistry Chemical Physics, 2020, 22, 13923-13929.	1.3	7
20	Oxygen reduction reaction on gold in alkaline solutions â€“ The inner or outer sphere mechanisms in the light of recent achievements. Current Opinion in Electrochemistry, 2019, 14, 180-185.	2.5	23
21	An Unusual Exchange Mechanism in the Tafel Reaction on Pt(110)â€(1Ã—1) Surfaces. ChemElectroChem, 2019, 6, 3279-3284.	1.7	4
22	Why are trace amounts of chloride so highly surface-active?. Journal of Electroanalytical Chemistry, 2019, 847, 113128.	1.9	2
23	The Mechanism of Oxidation of Formic Acid in Acidic Solutions on Boronâ€Doped Diamond Electrodes: A Quantum Chemical Study. ChemElectroChem, 2019, 6, 2901-2907.	1.7	2
24	Electron Transfer across the Graphene Electrode/Solution Interface: Interplay between Different Kinetic Regimes. Journal of Physical Chemistry C, 2019, 123, 12346-12354.	1.5	19
25	The initial stage of OH adsorption on Ni(111). Journal of Electroanalytical Chemistry, 2019, 832, 137-141.	1.9	7
26	The Preâ€exponential Factor in Electrochemistry. Angewandte Chemie - International Edition, 2018, 57, 7948-7956.	7.2	46
27	Der prÃexponentielle Faktor in der Elektrochemie. Angewandte Chemie, 2018, 130, 8076-8085.	1.6	2
28	Oxidation of oxalic acid on boron-doped diamond electrode in acidic solutions. Journal of Electroanalytical Chemistry, 2018, 819, 410-416.	1.9	6
29	AdsorciÃ³n de aniones en electrodos. nanoestructurados de Ag sobre HOPG. Revista Materia, 2018, 23, .	0.1	0
30	DeterminaciÃ³n del Ã¡rea de superficie real de electrodos de titanio modificado con platino por voltamperometrÃa cÃclica. Revista Materia, 2018, 23, .	0.1	0
31	Defying Coulomb's law: A lattice-induced attraction between lithium ions. Carbon, 2018, 139, 808-812.	5.4	10
32	Strain Effects on the Oxidation of CO and HCOOH on Auâ€“Pd Coreâ€“Shell Nanoparticles. ACS Catalysis, 2017, 7, 1673-1680.	5.5	51
33	Does the Sâ€”H Bond Always Break after Adsorption of an Alkylthiol on Au(111)?. Chemistry - A European Journal, 2017, 23, 1402-1408.	1.7	23
34	Oxygen Reduction in Alkaline Mediaâ€”a Discussion. Electrocatalysis, 2017, 8, 554-564.	1.5	17
35	Hydrogen Evolution Reaction on Nanostructures Electrodesâ€”a Scenario on Stepped Silver Surfaces. Electrocatalysis, 2017, 8, 587-593.	1.5	4
36	Hydrogen evolution at Pt(111) â€“ activation energy, frequency factor and hydrogen repulsion. Electrochimica Acta, 2017, 255, 391-395.	2.6	36

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37	Understanding the structure and reactivity of NiCu nanoparticles: an atomistic model. Physical Chemistry Chemical Physics, 2017, 19, 26812-26820.	1.3	14
38	Adiabatic Electronâ€Transfer Reactions on Semiconducting Electrodes. ChemPhysChem, 2017, 18, 111-116.	1.0	11
39	Interaction of Hydrogen with Au Modified by Pd and Rh in View of Electrochemical Applications. Computation, 2016, 4, 26.	1.0	6
40	On the Energetics of Ions in Carbon and Gold Nanotubes. ChemPhysChem, 2016, 17, 78-85.	1.0	19
41	Molecular dissociation in presence of a catalyst: II. The bond breaking role of the transition from virtual to localized states. Materials Research Express, 2016, 3, 085017.	0.8	3
42	Combined ab initio and XPS Investigations of the Electronic Interactions of Lâ€“Cysteine Adsorbed on GaAs(1 0 0). ChemistrySelect, 2016, 1, 3623-3634.	0.7	1
43	A scenario for oxygen reduction in alkaline media. Nano Energy, 2016, 29, 362-368.	8.2	15
44	Thermodynamics is not enough â€" The case of the Volmer reaction on silver. Electrochemistry Communications, 2016, 73, 42-45.	2.3	3
45	A scenario for oxygen reduction in alkaline media. Nano Energy, 2016, 26, 558-564.	8.2	20
46	Oxygen Reduction on Ag(100) in Alkaline Solutionsâ€"A Theoretical Study. ChemPhysChem, 2016, 17, 500-505.	1.0	12
47	Electronic Anisotropy at Vicinal Ag(1 1 n) Surfaces: Energetics of Hydrogen Adsorption. Journal of Physical Chemistry C, 2016, 120, 2109-2118.	1.5	4
48	Unravelling the hydrogen absorption process in Pd overlayers on a Au(111) surface. Physical Chemistry Chemical Physics, 2016, 18, 3659-3668.	1.3	10
49	Key role of anions in the 2Dâ€“3D electrochemical deposition of Rh on Ag electrodes. Electrochimica Acta, 2015, 178, 813-822.	2.6	6
50	Nanotubes for charge storage â€" towards an atomistic model. Electrochimica Acta, 2015, 162, 11-16.	2.6	31
51	Hydrogen Evolution Reaction on Palladium Multilayers Deposited on Au(111): A Theoretical Approach. Langmuir, 2015, 31, 858-867.	1.6	28
52	Molecular dissociation in the presence of catalysts: interpreting bond breaking as a quantum dynamical phase transition. Journal of Physics Condensed Matter, 2015, 27, 315501.	0.7	4
53	Catalytic properties of Au electrodes modified by an underlayer of Pd. Surface Science, 2015, 631, 235-247.	0.8	23
54	On the Electrochemical Deposition and Dissolution of Divalent Metal Ions. ChemPhysChem, 2014, 15, 132-138.	1.0	28

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55	Spontaneous formation of metallic nanostructures on highly oriented pyrolytic graphite (HOPG): an ab initio and experimental study. Faraday Discussions, 2014, 172, 327-347.	1.6	14
56	Electrochemical Adsorption of OH on Pt(111) in Alkaline Solutions: Combining DFT and Molecular Dynamics. ChemPhysChem, 2014, 15, 2003-2009.	1.0	24
57	Structure and stability of graphene edges in O2 and H2 environments from ab initio thermodynamics. Carbon, 2014, 78, 181-189.	5.4	15
58	Screening of ions in carbon and gold nanotubes â€" A theoretical study. Electrochemistry Communications, 2014, 45, 48-51.	2.3	34
59	Volcano plots in hydrogen electrocatalysis â€“ uses and abuses. Beilstein Journal of Nanotechnology, 2014, 5, 846-854.	1.5	410
60	Spin effects in oxygen electrocatalysis: A discussion. Electrochemistry Communications, 2013, 33, 14-17.	2.3	30
61	Current transients for the hydrogen evolution reaction at high overpotentials on silver electrodes in acid solutions: Experiments and modelling. Electrochimica Acta, 2013, 109, 403-410.	2.6	19
62	First insights of the electrocatalytical properties of stepped silver electrodes for the hydrogen evolution reaction. Electrochemistry Communications, 2013, 34, 235-238.	2.3	8
63	Stability and Hydrogen Affinity of Graphite-Supported Wires of Cu, Ag, Au, Ni, Pd, and Pt. Journal of Physical Chemistry C, 2013, 117, 19239-19244.	1.5	10
64	Electronic changes at the Pt(111) interface induced by the adsorption of OH species. Catalysis Today, 2013, 202, 120-127.	2.2	9
65	Hydrogen oxidation on ordered intermetallic phases of platinum and tin â€“ A combined experimental and theoretical study. Catalysis Today, 2013, 202, 191-196.	2.2	13
66	Why Silver Deposition is so Fast: Solving the Enigma of Metal Deposition. Angewandte Chemie - International Edition, 2013, 52, 7883-7885.	7.2	47
67	Solvated protons in density functional theoryâ€"A few examples. Electrochimica Acta, 2013, 105, 248-253.	2.6	27
68	Electronic Anisotropy at Vicinal Ag(11n) Surfaces: Work Function Changes Induced by Steps and Hydrogen Adsorption. Journal of Physical Chemistry C, 2013, 117, 4606-4618.	1.5	23
69	Why is Gold such a Good Catalyst for Oxygen Reduction in Alkaline Media?. Angewandte Chemie - International Edition, 2012, 51, 12997-13000.	7.2	118
70	Evanescent-wave cavity ring-down spectroscopy applied to electrochemical ion transfer at liquidâ€"liquid interfaces. Electrochemistry Communications, 2012, 23, 1-4.	2.3	5
71	Ab Initio Studies of Agâ€"S Bond Formation during the Adsorption of <scp>l</scp>-Cysteine on Ag(111). Langmuir, 2012, 28, 11472-11480.	1.6	30
72	A first principles study of the hydrogen reaction in alkaline media: OH effect. International Journal of Hydrogen Energy, 2012, 37, 14796-14800.	3.8	6

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73	Ab Initio Studies of the Electronic Structure of l-Cysteine Adsorbed on Ag(111). Langmuir, 2012, 28, 8084-8099.	1.6	25
74	Theory of electrocatalysis: hydrogen evolution and more. Physical Chemistry Chemical Physics, 2012, 14, 11224.	1.3	166
75	Electronic effects at self-assembled 4,4â€²-thio-bis-benzenethiolate protected Au nanoparticles on p-GaAs (100) electrodes. Electrochimica Acta, 2012, 77, 8-16.	2.6	4
76	Hemin interaction with bare and 4,4â€²-thio-bis-benzene-thiolate covered n-GaAs (110) electrodes. Physical Chemistry Chemical Physics, 2011, 13, 17104.	1.3	5
77	Electron transfer to heteronuclear diatomic molecules. Journal of Electroanalytical Chemistry, 2011, 660, 314-319.	1.9	5
78	Effect of Coverage and Defects on the Adsorption of Propanethiol on Au(111) Surface: A Theoretical Study. Langmuir, 2011, 27, 14514-14521.	1.6	29
79	A model for the Heyrovsky reaction as the second step in hydrogen evolution. Physical Chemistry Chemical Physics, 2011, 13, 6992.	1.3	34
80	Hydrogen electrocatalysis on overlayers of rhodium over gold and palladium substratesâ€”more active than platinum?. Physical Chemistry Chemical Physics, 2011, 13, 16437.	1.3	29
81	Theory meets experiment: Electrocatalysis of hydrogen oxidation/evolution at Pdâ€“Au nanostructures. Catalysis Today, 2011, 177, 55-63.	2.2	62
82	Hydrogen Electrocatalysis on Single Crystals and on Nanostructured Electrodes. ChemPhysChem, 2011, 12, 2274-2279.	1.0	69
83	Recent Progress in Hydrogen Electrocatalysis. Advances in Physical Chemistry, 2011, 2011, 1-14.	2.0	25
84	Intrinsic stability and hydrogen affinity of pure and bimetallic nanowires. Journal of Chemical Physics, 2011, 134, 174106.	1.2	3
85	Interfacial Electrochemistry. , 2010, , .		313
86	Hydrogen Evolution on Singleâ€Crystal Copper and Silver: A Theoretical Study. ChemPhysChem, 2010, 11, 1491-1495.	1.0	25
87	Stability of Gold and Platinum Nanowires on Graphite Edges. ChemPhysChem, 2010, 11, 2361-2366.	1.0	7
88	Hydrogen evolution on a pseudomorphic Cu-layer on Ni(111) â€“ A theoretical study. Journal of Electroanalytical Chemistry, 2010, 649, 149-152.	1.9	8
89	On the electrocatalysis of nanostructures: Monolayers of a foreign atom (Pd) on different substrates M(111). Electrochimica Acta, 2010, 55, 4346-4352.	2.6	45
90	Inner sphere and ion-transfer reactions. , 2010, , 145-162.		6

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91	AuS and SH Bond Formation/Breaking during the Formation of Alkanethiol SAMs on Au(111): A Theoretical Study. Journal of Physical Chemistry C, 2010, 114, 9444-9452.	1.5	89
92	Recent Advances in Theoretical Aspects of Electrocatalysis. Modern Aspects of Electrochemistry, 2010, , 25-88.	0.2	10
93	Hydrogen reaction and electrocatalysis. , 2010, , 163-175.		13
94	Selected experimental results for electron-transfer reactions. , 2010, , 133-143.		0
95	Electrochemical surface processes. , 2010, , 195-206.		0
96	Experimental techniques for electrode kinetics â€“ non-stationary methods. , 2010, , 235-257.		0
97	Model for the electrocatalysis of hydrogen evolution. Physical Review B, 2009, 79, .	1.1	142
98	Hydrogen evolution and oxidationâ€”a prototype for an electrocatalytic reaction. Journal of Solid State Electrochemistry, 2009, 13, 1101-1109.	1.2	25
99	Some properties of electrochemical nanostructures. Journal of Chemical Sciences, 2009, 121, 575-577.	0.7	3
100	Electrochemical reactivity and fractional conductance of nanowires. Electrochemistry Communications, 2009, 11, 1764-1767.	2.3	23
101	On the catalysis of the hydrogen oxidation. Faraday Discussions, 2009, 140, 209-218.	1.6	23
102	Potential-Induced Conformational Changes in an Î±-CN-terthiophene Thiolate Film on GaAs(110). Langmuir, 2009, 25, 6522-6531.	1.6	8
103	Experimental and theoretical studies of l-cysteine adsorbed at Ag(111) electrodes. Electrochimica Acta, 2008, 53, 6807-6817.	2.6	32
104	Bond-breaking electron transfer of diatomic reactants at metal electrodes. Chemical Physics, 2008, 344, 195-201.	0.9	35
105	Electronic interactions decreasing the activation barrier for the hydrogen electro-oxidation reaction. Electrochimica Acta, 2008, 53, 6149-6156.	2.6	24
106	Electrocatalysis of Hydrogen Oxidationâ€”Theoretical Foundations. Angewandte Chemie - International Edition, 2007, 46, 8262-8265.	7.2	84
107	Fundamental aspects of electrocatalysis. Chemical Physics, 2007, 332, 39-47.	0.9	46
108	l-Cysteine films on Ag(111) investigated by electrochemical and nonlinear optical methods. Chemical Physics, 2007, 342, 236-244.	0.9	32

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109	Catalyzed bond-breaking electron transfer: Effect of the separation of the reactant from the electrode. Journal of Electroanalytical Chemistry, 2007, 607, 101-106.	1.9	7
110	A model for bond-breaking electron transfer at metal electrodes. Chemical Physics Letters, 2006, 419, 421-425.	1.2	42
111	d-Band Catalysis in Electrochemistry. ChemPhysChem, 2006, 7, 2282-2285.	1.0	94
112	Field effects and surface states in second harmonic generation at n-GaAs(hkl) electrodes. Electrochimica Acta, 2005, 50, 4830-4836.	2.6	10
113	Second harmonic generation from Ag(111) electrochemical interfaces at the interband transition region: Effects of the presence of self-assembled monolayers. Electrochimica Acta, 2005, 50, 4837-4849.	2.6	6
114	First-principles calculation of the second harmonic response of Ag(111) and Ag(100) surfaces. Physical Review B, 2005, 71, .	1.1	2
115	Second-Order Nonlinear Optical Properties of the Ag(111)/Electrolyte Interface in the Presence of Self-Assembled Monolayers Containing Conjugated Ï€ Systems. I. Î±-Functionalized Terthiophene Films on Ag(111). Langmuir, 2005, 21, 6406-6421.	1.6	5
116	Second harmonic generation and impedance spectroscopy at n-GaAs(1 0 0) electrodes. Electrochimica Acta, 2004, 49, 4231-4238.	2.6	13
117	Changes in the surface energy during the reconstruction of Au(100) and Au(111) electrodes. Chemical Physics Letters, 2004, 400, 26-29.	1.2	28
118	In situ second harmonic generation studies from covered Ag(111) electrodes. Journal of Solid State Electrochemistry, 2003, 7, 567-571.	1.2	6
119	Characterisation of chloride and bromide specific adsorption process on silver single crystal surfaces by impedance spectroscopy. Journal of Electroanalytical Chemistry, 2003, 556, 127-136.	1.9	27
120	Investigation of Adsorbed Halide Layers on Single-Crystal Silver Electrodes by Second-Harmonic Generation. Langmuir, 2003, 19, 4723-4727.	1.6	9
121	Second Harmonic Generation from Ag(111) Electrodes Covered by Various Organosulfur Compounds. Langmuir, 2002, 18, 2771-2779.	1.6	13
122	Hydrogen evolution on silver single crystal electrodesâ€"first results. Journal of Electroanalytical Chemistry, 1999, 461, 76-79.	1.9	65
123	Second harmonic generation from silver single-crystal electrodes. Journal of Electroanalytical Chemistry, 1998, 447, 71-80.	1.9	19
124	Impedance studies of reconstructed and non-reconstructed gold single crystal surfaces. Journal of Electroanalytical Chemistry, 1996, 419, 23-31.	1.9	65
125	ETR on TiO2 films modified by Pt doping. Electrochimica Acta, 1994, 39, 1291-1295.	2.6	13
126	Erythromycin transfer across the water â‹Ž 1,2-dichloroethane interface modified by a phospholipid monolayer. Journal of Electroanalytical Chemistry, 1994, 379, 151-158.	1.9	13

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127	Characterization of TiO2 films modified by platinum doping. Thin Solid Films, 1992, 219, 7-17.	0.8	61
128	CO adsorbate on Pt(111) single crystal surfaces. Electrochimica Acta, 1991, 36, 555-561.	2.6	59
129	Characterization of passive films on zinc electrodes by impedance measurements and XPS. Electrochimica Acta, 1991, 36, 1491-1499.	2.6	21
130	Study of the methanol adsorbates on Pt(100) and Pt(111) single crystal surfaces. Electrochimica Acta, 1988, 33, 1499-1506.	2.6	14
131	Comparative study of CO absorbates for different structures of platinum surfaces. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1987, 227, 199-211.	0.3	37
132	Identification of the adsorbate during methanol oxidation. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1987, 229, 367-376.	0.3	92
133	Voltammetric Electroâ€Oxidation of Carbon Monoxide Previously Adsorbed on Electrochemically Modified Platinum Electrodes. Journal of the Electrochemical Society, 1986, 133, 1660-1662.	1.3	14
134	On the use of the coulostatic method for the investigation of fast redox systems. Electrochimica Acta, 1986, 31, 431-437.	2.6	27
135	Voltammetry of UPD copper and formic acid as characterization of preferentially oriented polycrystalline platinum surfaces. Electrochimica Acta, 1986, 31, 1495-1500.	2.6	15
136	The effect of adsorbed carbon monoxide on hydrogen adsorption and hydrogen evolution on platinum. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1986, 215, 357-367.	0.3	49
137	Electrocatalytic oxidation of organic molecules in alkaline solutionsâ€”II. Electroadsorption and electrooxidation of ethylene glycol at platinum. Electrochimica Acta, 1985, 30, 871-878.	2.6	17
138	Electrodesorption spectra of residues formed on electrochemically modified polycrystalline platinum from carbon dioxide, formic acid, methanol and ethylene glycol adsorption. Electrochimica Acta, 1985, 30, 1111-1114.	2.6	20
139	Electrooxidation of adsorbed CO on polycrystalline platinum in alkaline solutions. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1984, 172, 201-210.	0.3	30
140	Electrocatalytic oxidation of organic molecules in alkaline solutionsâ€”I. Oxidation of 1,3 dioxolane at platinum. Electrochimica Acta, 1984, 29, 1327-1333.	2.6	3
141	Electrochemical Electron Transfer: From Marcus Theory to Electrocatalysis. , 0, , 31-55.		4
142	Desorption of hydrogen from graphene induced by charge injection. ChemElectroChem, 0, , .	1.7	2
143	Desorption of Hydrogen from Graphene Induced by Charge Injection. ChemElectroChem, 0, , .	1.7	0