

# Pilar Carro

## List of Publications by Year in descending order

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77  
papers

3,282  
citations

279798

23  
h-index

149698

56  
g-index

81  
all docs

81  
docs citations

81  
times ranked

5144  
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-assembled monolayers of thiols and dithiols on gold: new challenges for a well-known system. <i>Chemical Society Reviews</i> , 2010, 39, 1805.	38.1	1,200
2	The Chemistry of the Sulfur-Gold Interface: In Search of a Unified Model. <i>Accounts of Chemical Research</i> , 2012, 45, 1183-1192.	15.6	459
3	Self-assembled monolayers of thiolates on metals: a review article on sulfur-metal chemistry and surface structures. <i>RSC Advances</i> , 2014, 4, 27730-27754.	3.6	187
4	Enhanced Stability of Thiolate Self-Assembled Monolayers (SAMs) on Nanostructured Gold Substrates. <i>Langmuir</i> , 2009, 25, 5661-5666.	3.5	70
5	Growth Mode Transition Involving a Potential-Dependent Isotropic to Anisotropic Surface Atom Diffusion Change. <i>Gold Electrodeposition on HOPG followed by STM</i> . <i>Langmuir</i> , 1997, 13, 100-110.	3.5	69
6	Electrodesorption Potentials of Self-Assembled Alkanethiolate Monolayers on Ag(111) and Au(111). An Electrochemical, Scanning Tunneling Microscopy and Density Functional Theory Study. <i>Journal of Physical Chemistry B</i> , 2002, 106, 12267-12273.	2.6	66
7	Understanding the Surface Chemistry of Thiolate-Protected Metallic Nanoparticles. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 3127-3138.	4.6	66
8	Electrochemical Formation of Palladium Islands on HOPG: Kinetics, Morphology, and Growth Mechanisms. <i>Journal of Physical Chemistry B</i> , 2002, 106, 4232-4244.	2.6	62
9	Electrodesorption Potentials of Self-Assembled Alkanethiolate Monolayers on Copper Electrodes. An Experimental and Theoretical Study. <i>Journal of Physical Chemistry B</i> , 2003, 107, 13446-13454.	2.6	51
10	Electrochemical Self-Assembly of Melanin Films on Gold. <i>Langmuir</i> , 2005, 21, 5924-5930.	3.5	48
11	Complex Surface Chemistry of 4-Mercaptopyridine Self-Assembled Monolayers on Au(111). <i>Langmuir</i> , 2012, 28, 6839-6847.	3.5	45
12	Electrochemical Self-Assembly of Alkanethiolate Molecules on Ni(111) and Polycrystalline Ni Surfaces. <i>Journal of Physical Chemistry B</i> , 2005, 109, 23450-23460.	2.6	42
13	Evidence for the Formation of Different Energetically Similar Atomic Structures in Ag(111)-(7 $\times$ 7)-R19.1 $\times$ CH <sub>3</sub> S. <i>Physical Review Letters</i> , 2006, 97, 226103.	7.8	37
14	From Single to Multiple Ag-Layer Modification of Au Nanocavity Substrates: A Tunable Probe of the Chemical Surface-Enhanced Raman Scattering Mechanism. <i>ACS Nano</i> , 2011, 5, 5433-5443.	14.6	37
15	Are 4-Mercaptobenzoic Acid Self Assembled Monolayers on Au(111) a Suitable System to Test Adatom Models?. <i>Journal of Physical Chemistry C</i> , 2012, 116, 25765-25771.	3.1	35
16	Thiol with an Unusual Adsorption-Desorption Behavior: 6-Mercaptopurine on Au(111). <i>Langmuir</i> , 2010, 26, 17068-17074.	3.5	34
17	Alkanethiol Adsorption on Platinum: Chain Length Effects on the Quality of Self-Assembled Monolayers. <i>Journal of Physical Chemistry C</i> , 2011, 115, 17788-17798.	3.1	34
18	The Complex Thiol-Palladium Interface: A Theoretical and Experimental Study. <i>Langmuir</i> , 2010, 26, 14655-14662.	3.5	33

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19	Scanning tunneling microscopy and scanning electron microscopy observations of the early stage of silver deposition on graphite single crystal electrodes. <i>The Journal of Physical Chemistry</i> , 1992, 96, 10454-10460.	2.9	29
20	Surface Structure and Chemistry of Alkanethiols on Au(100)-(1 $\times$ 1) Substrates. <i>Journal of Physical Chemistry C</i> , 2016, 120, 291-296.	3.1	28
21	Growth of three-dimensional silver fractal electrodeposits under damped free convection. <i>Physical Review E</i> , 1993, 48, R2374-R2377.	2.1	25
22	Thiol Adsorption on the Au(100)-hex and Au(100)-(1 $\times$ 1) Surfaces. <i>Journal of Physical Chemistry C</i> , 2015, 119, 14248-14254.	3.1	25
23	Hydrocarbon Chain Length Induces Surface Structure Transitions in Alkanethiolate "Gold Adatom Self-Assembled Monolayers on Au(111). <i>Journal of Physical Chemistry C</i> , 2013, 117, 2160-2165.	3.1	24
24	Surface Structure of 4-Mercaptopyridine on Au(111): A New Dense Phase. <i>Langmuir</i> , 2017, 33, 9565-9572.	3.5	24
25	The electrochemical stability of thiols on gold surfaces. <i>Journal of Electroanalytical Chemistry</i> , 2018, 819, 234-239.	3.8	24
26	A New Electrochemical Method for Determining the Fractal Dimension of the Surface of Rough Metal Electrodeposits: Its Application to Dendritic Silver Surfaces. <i>Journal of the Electrochemical Society</i> , 1992, 139, 1064-1070.	2.9	23
27	Interplay of Surface Diffusion and Surface Tension in the Evolution of Solid/Liquid Interfaces. Dealloying of $\beta$ -Brass in Aqueous Sodium Chloride. <i>Journal of Physical Chemistry B</i> , 2000, 104, 8229-8237.	2.6	23
28	Molecular Self-Assembly on Ultrathin Metallic Surfaces: Alkanethiolate Monolayers on Ag(1 $\times$ 1) Surfaces. <i>Journal of Physical Chemistry C</i> , 2000, 104, 1075-1081.	2.6	22
29	Role of the capping agent in the interaction of hydrophilic Ag nanoparticles with DMPC as a model biomembrane. <i>Environmental Science: Nano</i> , 2016, 3, 462-472.	4.3	22
30	The Influence of Adsorbates on the Growth Mode of Gold Islands Electrodeposited on the Basal Plane of Graphite. <i>Langmuir</i> , 2000, 16, 2915-2923.	3.5	21
31	Surface Chemistry of 4-Mercaptobenzoic Acid Self-Assembled on Ag(111) and Ag Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2013, 117, 24967-24974.	3.1	21
32	On the Thermodynamic Stability of (1 $\times$ 1) Methanethiolate Lattice on Reconstructed Au(111) Surface Models. <i>Journal of Physical Chemistry C</i> , 2008, 112, 19121-19124.	3.1	20
33	A Monte Carlo Simulation of Roughness Development during the Dissolution of a Pure Solid. <i>Journal of the Electrochemical Society</i> , 1995, 142, 3806-3811.	2.9	17
34	Sulfidization of Au(111) from Thioacetic Acid: An Experimental and Theoretical Study. <i>Langmuir</i> , 2012, 28, 15278-15285.	3.5	16
35	The role of the crystalline face in the ordering of 6-mercaptopurine self-assembled monolayers on gold. <i>Nanoscale</i> , 2016, 8, 17231-17240.	5.6	16
36	Chemical Defect-Driven Response on Graphene-Based Chemiresistors for Sub-ppm Ammonia Detection. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	13.8	16

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37	Transport phenomena and growth modes of silver electrodeposits. <i>Journal of Electroanalytical Chemistry</i> , 1995, 396, 183-195.	3.8	15
38	Kinetics and Mechanism of Gold Dendrite Electroformation on C(0001). Activation Energy for Gold Adatom Surface Diffusion. <i>Journal of Physical Chemistry B</i> , 1999, 103, 3900-3907.	2.6	15
39	Three-Dimensional Monte Carlo Simulations of Roughness Development from Different Mechanisms Applicable to the Dissolution of a Pure Solid. <i>Langmuir</i> , 1997, 13, 833-841.	3.5	14
40	Electrocatalytic and Magnetic Properties of Ultrathin Nanostructured Iron-Melanin Films on Au(111). <i>Chemistry - A European Journal</i> , 2007, 13, 473-482.	3.3	14
41	Solving the Long-Standing Controversy of Long-Chain Alkanethiols Surface Structure on Au(111). <i>Journal of Physical Chemistry C</i> , 2018, 122, 3893-3902.	3.1	14
42	A novel model for the $(\sqrt{3} \times \sqrt{3})R30^\circ$ alkanethiolate-Au(111) phase based on alkanethiolate-Au adatom complexes. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 19017.	2.8	13
43	Electrochemical kinetics and growth modes of silver deposits on polyfaceted platinum spherical electrodes. <i>Electrochimica Acta</i> , 1992, 37, 2215-2227.	5.2	12
44	On the Thermodynamic Stability of $\sqrt{3} \times \sqrt{3}$ -Alkanedithiols Self-Assembled Monolayers on Unreconstructed and Reconstructed Au(111). <i>Langmuir</i> , 2010, 26, 9589-9595.	3.5	12
45	Role of Gold Adatoms in the Adsorption of Sulfide Species on the Gold(001)-hex Surface. <i>Journal of Physical Chemistry C</i> , 2018, 122, 2207-2214.	3.1	12
46	Structure and Electronic and Charge-Transfer Properties of Mercaptobenzoic Acid and Mercaptobenzoic Acid-Undecanethiol Mixed Monolayers on Au(111). <i>Journal of Physical Chemistry C</i> , 2014, 118, 30013-30022.	3.1	11
47	Mapping nanometric electronic property changes induced by an aryl diazonium sub-monolayer on HOPG. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 29218-29225.	2.8	11
48	Mass-transport-induced kinetic transitions during the electrochemical formation of three-dimensional dendritic silver deposits under ohmic control. <i>Journal of Electroanalytical Chemistry</i> , 1992, 336, 85-97.	3.8	10
49	New Insight into the Interface Chemistry and Stability of Glutathione Self-Assembled Monolayers on Au(111). <i>Journal of Physical Chemistry C</i> , 2016, 120, 14597-14607.	3.1	10
50	Changes in the growth mode of electrodeposited silver layers. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1991, 310, 361-377.	0.1	9
51	Mechanisms of Defect Generation and Clustering in CH <sub>3</sub> S Self-Assembled Monolayers on Au(111). <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 2159-2163.	4.6	9
52	Exploring the core level shift origin of sulfur and thiolates on Pd(111) surfaces. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 24349-24355.	2.8	9
53	Effect of Ag Adatoms on High-Coverage Alkanethiolate Adsorption on Au(111). <i>Journal of Physical Chemistry C</i> , 2008, 112, 4557-4563.	3.1	8
54	6-Mercaptopurine Self-Assembled Monolayers on Gold (001)-Hex: Revealing the Fate of Gold Adatoms. <i>Journal of Physical Chemistry C</i> , 2017, 121, 8938-8943.	3.1	8

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55	Polymorphism and metal-induced structural transformation in 5,5'-bis(4-pyridyl)(2,2'-bispyrimidine) adlayers on Au(111). <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 15960-15969.	2.8	8
56	Competition between metal-catalysed electroreduction of dinitrogen, protons, and nitrogen oxides: a DFT perspective. <i>Catalysis Science and Technology</i> , 2022, 12, 2856-2864.	4.1	8
57	An ac impedance study of dendritic silver three-dimensional electrodeposits. <i>Electrochimica Acta</i> , 1993, 38, 1545-1549.	5.2	7
58	The Role of a Double Molecular Anchor on the Mobility and Self-Assembly of Thiols on Au(111): The Case of Mercaptobenzoic Acid. <i>ChemPhysChem</i> , 2017, 18, 804-811.	2.1	7
59	Morphological Changes in Electrografted Aryl-Based Thin Films Induced by using Diazonium Salts or Aryl Iodides. <i>ChemElectroChem</i> , 2018, 5, 464-470.	3.4	7
60	Gold adatoms modulate sulfur adsorption on gold. <i>Nanoscale</i> , 2019, 11, 19341-19351.	5.6	7
61	New aspects of the surface chemistry of sulfur on Au(111): Surface structures formed by gold-sulfur complexes. <i>Applied Surface Science</i> , 2019, 487, 848-856.	6.1	6
62	Dynamics of RS-(Au-SR) <sub>n</sub> Staple Motifs on Metal Surfaces: From Nanoclusters to 2D Surfaces. <i>Journal of Physical Chemistry C</i> , 2020, 124, 5452-5459.	3.1	6
63	Shedding Light on the Interfacial Structure of Low-Coverage Alkanethiol Lattices. <i>Journal of Physical Chemistry C</i> , 2020, 124, 26748-26758.	3.1	6
64	Adsorption of Tl(I) on mercury in thiocyanate media. <i>Electrochimica Acta</i> , 1985, 30, 811-815.	5.2	5
65	Electronic Structure of a Self-Assembled Monolayer with Two Surface Anchors: 6-Mercaptopurine on Au(111). <i>Langmuir</i> , 2018, 34, 5696-5702.	3.5	5
66	Effect of Ligands on the Stability of Gold Nanoclusters. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 6475-6480.	4.6	5
67	A Combined Scanning Tunneling Microscopy and Electrochemical Study of Copper Electrodeposition from a Cyanide Solution on a Zinc Alloy. <i>Journal of the Electrochemical Society</i> , 2000, 147, 4546.	2.9	4
68	Melanin films on Au(111): Adsorption and molecular conductance. <i>Organic Electronics</i> , 2012, 13, 1844-1852.	2.6	4
69	Topographic Changes of Polycrystalline Ag and Cu Electrodes in Acid Aqueous Solutions Resulting from a Prolonged Application of the Potential Reversal Technique. <i>Journal of the Electrochemical Society</i> , 1996, 143, 2294-2305.	2.9	3
70	Validity of the linear interface motion equation containing a negative surface-tension term: The dealloying of $\beta$ -brass. <i>Physical Review B</i> , 1998, 58, 9666-9669.	3.2	3
71	Combining Electrochemistry and Computational Chemistry to Understand Aryl-Radical Formation in Electrografting Processes. <i>Journal of Chemical Education</i> , 2018, 95, 1386-1391.	2.3	3
72	Unraveling the Causes of the Instability of Au <sub>n</sub> (SR) <sub>x</sub> Nanoclusters on Au(111). <i>Chemistry of Materials</i> , 2021, 33, 3428-3435.	6.7	3

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73	Study of the electrical double-layer between mercury and aqueous solutions of trifluoroacetic acid. <i>Electrochimica Acta</i> , 1984, 29, 619-624.	5.2	2
74	Adsorption of Tl(I) on mercury in azide media. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1986, 209, 361-369.	0.1	2
75	Chemical Defect-Driven Response on Graphene-Based Chemiresistors for Sub-ppm Ammonia Detection. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	2
76	Adsorption of 2-mercaptoethanol and In(III)-2-mercaptoethanol on mercury electrodes in HClO <sub>4</sub> + NaClO <sub>4</sub> medium. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1987, 238, 367-381.	0.1	1
77	The Adsorption of Iodide Anion on the Dropping Mercury Electrode in Water + 10% Ethanol Mixture. <i>Collection of Czechoslovak Chemical Communications</i> , 1992, 57, 1005-1014.	1.0	0