

Stephen Maldonado

List of Publications by Year in descending order

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126907

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times ranked

6772
citing authors

#	ARTICLE	IF	CITATIONS
1	A Description of the Faradaic Current in Cyclic Voltammetry of Adsorbed Redox Species on Semiconductor Electrodes. <i>Journal of the American Chemical Society</i> , 2022, 144, 6410-6419.	13.7	24
2	Detection of Ge-Containing Adlayers at the Liquid Hg/Water Interface by In Situ X-ray Reflectivity in Aqueous Borate Electrolytes Containing Dissolved GeO ₂ . <i>Journal of Physical Chemistry C</i> , 2022, 126, 8177-8189.	3.1	2
3	Electroreduction of Perchlorinated Silanes for Si Electrodeposition. <i>Journal of the Electrochemical Society</i> , 2021, 168, 022503.	2.9	10
4	Evidence for Facilitated Surface Transport during Ge Crystal Growth by Indium in Liquid Hg-In Alloys at Room Temperature. <i>Crystal Growth and Design</i> , 2021, 21, 1645-1656.	3.0	5
5	Chloride Oxidation as an Alternative to the Oxygen-Evolution Reaction on H ₂ WO ₃ Photoelectrodes. <i>Journal of Physical Chemistry C</i> , 2021, 125, 8543-8550.	3.1	9
6	Electro-reductive Fragmentation of Oxidized Lignin Models. <i>Journal of Organic Chemistry</i> , 2021, 86, 15927-15934.	3.2	16
7	Mechanism of Electrochemical Generation and Decomposition of Phthalimide-N-oxyl. <i>Journal of the American Chemical Society</i> , 2021, 143, 10324-10332.	13.7	42
8	Electrocatalytic Lignin Oxidation. <i>ACS Catalysis</i> , 2021, 11, 10104-10114.	11.2	60
9	Beyond the Laviron Method: A New Mathematical Treatment for Analyzing the Faradaic Current in Reversible, Quasi-Reversible, and Irreversible Cyclic Voltammetry of Adsorbed Redox Species. <i>Analytical Chemistry</i> , 2021, 93, 12672-12681.	6.5	14
10	Practical challenges in the development of photoelectrochemical solar fuels production. <i>Sustainable Energy and Fuels</i> , 2020, 4, 985-995.	4.9	58
11	The Importance of New "Sand-to-Silicon" Processes for the Rapid Future Increase of Photovoltaics. <i>ACS Energy Letters</i> , 2020, 5, 3628-3632.	17.4	36
12	Effect of Covalent Surface Functionalization of Si on the Activity of Trifluoromethanesulfonic Anhydride for Suppressing Surface Recombination. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 57560-57568.	8.0	2
13	Metastable Group IV Allotropes and Solid Solutions: Nanoparticles and Nanowires. <i>Chemistry of Materials</i> , 2020, 32, 2703-2741.	6.7	26
14	In Situ Transmission Electron Microscopy Measurements of Ge Nanowire Synthesis with Liquid Metal Nanodroplets in Water. <i>ACS Nano</i> , 2020, 14, 2869-2879.	14.6	23
15	Quantitative Analysis of Semiconductor Electrode Voltammetry: A Theoretical and Operational Framework for Semiconductor Ultramicroelectrodes. <i>Journal of Physical Chemistry C</i> , 2020, 124, 5021-5035.	3.1	5
16	Electrodeposition of Large Area, Angle-Insensitive Multilayered Structural Colors. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 29065-29071.	8.0	19
17	Protection of GaInP ₂ Photocathodes by Direct Photoelectrodeposition of MoS ₂ Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 25115-25122.	8.0	18
18	Selective C=O Bond Cleavage of Lignin Systems and Polymers Enabled by Sequential Palladium-Catalyzed Aerobic Oxidation and Visible-Light Photoredox Catalysis. <i>ACS Catalysis</i> , 2019, 9, 2252-2260.	11.2	95

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19	Discovery of Unusually Stable Reduced Viologen via Synergistic Folding and Encapsulation. <i>Journal of the Electrochemical Society</i> , 2019, 166, H825-H834.	2.9	3
20	Comparison of GaP nanowires grown from Au and Sn vapor-liquid-solid catalysts as photoelectrode materials. <i>Journal of Crystal Growth</i> , 2018, 482, 36-43.	1.5	8
21	Reduction of Graphene Oxide Thin Films by Cobaltocene and Decamethylcobaltocene. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 2004-2015.	8.0	22
22	Eutectic-Bismuth Indium as a Growth Solvent for the Electrochemical Liquid-Liquid-Solid Deposition of Germanium Microwires and Coiled Nanowires. <i>Crystal Growth and Design</i> , 2018, 18, 677-685.	3.0	9
23	Semiconductor Ultramicroelectrodes: Platforms for Studying Charge-Transfer Processes at Semiconductor/Liquid Interfaces. <i>Analytical Chemistry</i> , 2018, 90, 12261-12269.	6.5	9
24	Critical Factors in the Growth of Hyperdoped Germanium Microwires by Electrochemical Liquid-Liquid-Solid Method. <i>ACS Applied Nano Materials</i> , 2018, 1, 5553-5561.	5.0	15
25	Sensitization of p-GaP by Physisorbed Triarylmethane Dyes. <i>Journal of Physical Chemistry C</i> , 2018, 122, 20073-20082.	3.1	3
26	Electrochemical Liquid Phase Epitaxy (ec-LPE): A New Methodology for the Synthesis of Crystalline Group IV Semiconductor Epifilms. <i>Journal of the American Chemical Society</i> , 2017, 139, 6960-6968.	13.7	15
27	Concerted Electrodeposition and Alloying of Antimony on Indium Electrodes for Selective Formation of Crystalline Indium Antimonide. <i>Langmuir</i> , 2017, 33, 9280-9287.	3.5	4
28	High-Performance Polycrystalline Ge Microwire Film Anodes for Li Ion Batteries. <i>ACS Energy Letters</i> , 2017, 2, 238-243.	17.4	31
29	Electrochemical Measurements in In Situ TEM Experiments. <i>Journal of the Electrochemical Society</i> , 2017, 164, H358-H364.	2.9	44
30	Electrochemical Measurements during In Situ Liquid-Electrochemical TEM Experiments. <i>Microscopy and Microanalysis</i> , 2017, 23, 938-939.	0.4	1
31	Electrochemical Liquid-Liquid-Solid Deposition of Crystalline Gallium Antimonide. <i>Electrochimica Acta</i> , 2016, 197, 353-361.	5.2	12
32	Controlling Nucleation and Crystal Growth of Ge in a Liquid Metal Solvent. <i>Crystal Growth and Design</i> , 2016, 16, 7130-7138.	3.0	19
33	Direct electrochemical deposition of crystalline silicon nanowires at T = 60 °C. <i>RSC Advances</i> , 2016, 6, 78818-78825.	3.6	14
34	Electrochemical Liquid-Liquid-Solid Deposition of Ge at Hg Microdroplet Ultramicroelectrodes. <i>Journal of the Electrochemical Society</i> , 2016, 163, D500-D505.	2.9	8
35	Macroporous p-GaP Photocathodes Prepared by Anodic Etching and Atomic Layer Deposition Doping. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 16178-16185.	8.0	12
36	Sensitization of p-GaP with Monocationic Dyes: The Effect of Dye Excited-State Lifetime on Hole Injection Efficiencies. <i>Journal of Physical Chemistry C</i> , 2016, 120, 3145-3155.	3.1	20

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37	Chemically modified Si(111) surfaces simultaneously demonstrating hydrophilicity, resistance against oxidation, and low trap state densities. <i>Surface Science</i> , 2016, 645, 49-55.	1.9	9
38	Synthesis of photoactive ZnSnP ₂ semiconductor nanowires. <i>Journal of Materials Research</i> , 2015, 30, 2170-2178.	2.6	6
39	Wet Chemical Functionalization of GaP(111)B through a Williamson Ether-Type Reaction. <i>Journal of Physical Chemistry C</i> , 2015, 119, 1338-1345.	3.1	10
40	Electrochemical Liquid-Liquid-Solid (ec-LLS) Crystal Growth: A Low-Temperature Strategy for Covalent Semiconductor Crystal Growth. <i>Accounts of Chemical Research</i> , 2015, 48, 1881-1890.	15.6	41
41	Hybrid solar cells constructed of macroporous n-type GaP coated with PEDOT:PSS. <i>Chinese Chemical Letters</i> , 2015, 26, 469-473.	9.0	4
42	Electrochemical Liquid-Liquid-Solid Crystal Growth of Germanium Microwires on Hard and Soft Conductive Substrates at Low Temperature in Aqueous Solution. <i>Chemistry of Materials</i> , 2015, 27, 3389-3396.	6.7	22
43	Electrochemical Liquid-Liquid-Solid Deposition of Crystalline Ge Nanowires as a Function of Ga Nanodroplet Size. <i>Journal of the Electrochemical Society</i> , 2014, 161, D3044-D3050.	2.9	18
44	Room-Temperature Epitaxial Electrodeposition of Single-Crystalline Germanium Nanowires at the Wafer Scale from an Aqueous Solution. <i>Nano Letters</i> , 2014, 14, 847-852.	9.1	53
45	Photoelectrochemical Properties of CH ₃ -Terminated p-Type GaP(111)A. <i>Journal of Physical Chemistry C</i> , 2014, 118, 11593-11600.	3.1	25
46	Electrochemically Gated Alloy Formation of Crystalline InAs Thin Films at Room Temperature in Aqueous Electrolytes. <i>Chemistry of Materials</i> , 2014, 26, 4535-4543.	6.7	9
47	Secondary Functionalization of Allyl-Terminated GaP(111)A Surfaces via Heck Cross-Coupling Metathesis, Hydrosilylation, and Electrophilic Addition of Bromine. <i>Langmuir</i> , 2014, 30, 156-164.	3.5	16
48	Analysis of the Electrodeposition and Surface Chemistry of CdTe, CdSe, and CdS Thin Films through Substrate-Overlayer Surface-Enhanced Raman Spectroscopy. <i>Langmuir</i> , 2014, 30, 10344-10353.	3.5	16
49	Extreme Light Absorption by Multiple Plasmonic Layers on Upgraded Metallurgical Grade Silicon Solar Cells. <i>Nano Letters</i> , 2014, 14, 1961-1967.	9.1	34
50	Facile heterogenization of a cobalt catalyst via graphene adsorption: robust and versatile dihydrogen production systems. <i>Chemical Communications</i> , 2014, 50, 8065-8068.	4.1	40
51	Direct Electrodeposition of Crystalline Silicon at Low Temperatures. <i>Journal of the American Chemical Society</i> , 2013, 135, 1684-1687.	13.7	60
52	Uniform Thin Films of CdSe and CdSe(ZnS) Core(Shell) Quantum Dots by Sol-Gel Assembly: Enabling Photoelectrochemical Characterization and Electronic Applications. <i>ACS Nano</i> , 2013, 7, 1215-1223.	14.6	73
53	Sensitization of p-GaP with CdSe Quantum Dots: Light-Stimulated Hole Injection. <i>Journal of the American Chemical Society</i> , 2013, 135, 9275-9278.	13.7	32
54	Electrodeposition of Crystalline GaAs on Liquid Gallium Electrodes in Aqueous Electrolytes. <i>Journal of the American Chemical Society</i> , 2013, 135, 330-339.	13.7	33

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55	Discrete-contact nanowire photovoltaics. <i>Journal of Applied Physics</i> , 2013, 114, 174503.	2.5	2
56	Wet Chemical Functionalization of III-V Semiconductor Surfaces: Alkylation of Gallium Arsenide and Gallium Nitride by a Grignard Reaction Sequence. <i>Langmuir</i> , 2012, 28, 4672-4682.	3.5	35
57	Analysis of the operation of thin nanowire photoelectrodes for solar energy conversion. <i>Energy and Environmental Science</i> , 2012, 5, 5203-5220.	30.8	100
58	Template-Free Preparation of Crystalline Ge Nanowire Film Electrodes via an Electrochemical Liquid-Liquid-Solid Process in Water at Ambient Pressure and Temperature for Energy Storage. <i>Nano Letters</i> , 2012, 12, 4617-4623.	9.1	78
59	High Efficiency Thin Upgraded Metallurgical-Grade Silicon Solar Cells on Flexible Substrates. <i>Nano Letters</i> , 2012, 12, 5143-5147.	9.1	46
60	Preparation of photoactive ZnGeP ₂ nanowire films. <i>Journal of Materials Chemistry</i> , 2012, 22, 6613.	6.7	10
61	Dye-Sensitized Photocathodes: Efficient Light-Stimulated Hole Injection into p-GaP Under Depletion Conditions. <i>Journal of the American Chemical Society</i> , 2012, 134, 10670-10681.	13.7	54
62	Photoresponse Characteristics of Archetypal Metal-Organic Frameworks. <i>Journal of Physical Chemistry C</i> , 2012, 116, 3112-3121.	3.1	32
63	Benchtop Electrochemical Liquid-Liquid-Solid Growth of Nanostructured Crystalline Germanium. <i>Journal of the American Chemical Society</i> , 2011, 133, 13292-13295.	13.7	64
64	Overlayer Surface-Enhanced Raman Spectroscopy for Studying the Electrodeposition and Interfacial Chemistry of Ultrathin Ge on a Nanostructured Support. <i>ACS Nano</i> , 2011, 5, 1818-1830.	14.6	12
65	Structural and Photoelectrochemical Properties of GaP Nanowires Annealed in NH ₃ . <i>Journal of Physical Chemistry C</i> , 2011, 115, 22652-22661.	3.1	14
66	Control of the pH-Dependence of the Band Edges of Si(111) Surfaces Using Mixed Methyl/Allyl Monolayers. <i>Journal of Physical Chemistry C</i> , 2011, 115, 8594-8601.	3.1	33
67	Nanostructured phosphides as photoelectrode materials for artificial photosynthesis. , 2011, , .		0
68	Dye-Sensitized Hole Injection at p-type III-V Electrode Interfaces. <i>ECS Transactions</i> , 2011, 35, 153-163.	0.5	2
69	Voltammetric Characterization of Redox-Inactive Guest Binding to Ln ^{III} [15-Crown-5] Hosts Based on Competition with a Redox Probe. <i>Chemistry - A European Journal</i> , 2010, 16, 6786-6796.	3.3	52
70	Preparation and Photoelectrochemical Activity of Macroporous p-GaP(100). <i>Journal of the Electrochemical Society</i> , 2010, 157, D588.	2.9	11
71	Physicochemical and Electrochemical Properties of Etched GaP(111)A and GaP(111)B Surfaces. <i>Journal of the Electrochemical Society</i> , 2010, 157, H487.	2.9	19
72	Comparison of majority carrier charge transfer velocities at Si/polymer and Si/metal photovoltaic heterojunctions. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	46

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73	Wet Chemical Functionalization of III-V Semiconductor Surfaces: Alkylation of Gallium Phosphide Using a Grignard Reaction Sequence. <i>Langmuir</i> , 2010, 26, 10890-10896.	3.5	38
74	Design Considerations for Nanowire Heterojunctions in Solar Energy Conversion/Storage Applications. <i>Journal of Physical Chemistry C</i> , 2010, 114, 12010-12017.	3.1	56
75	Response versus Chain Length of Alkanethiol-Capped Au Nanoparticle Chemiresistive Chemical Vapor Sensors. <i>Journal of Physical Chemistry C</i> , 2010, 114, 21914-21920.	3.1	43
76	Behavior of Electrodeposited Cd and Pb Schottky Junctions on CH ₃ -Terminated n-Si(111) Surfaces. <i>Journal of the Electrochemical Society</i> , 2009, 156, H123.	2.9	17
77	Flexible Polymer-Embedded Si Wire Arrays. <i>Advanced Materials</i> , 2009, 21, 325-328.	21.0	144
78	Macroporous n-GaP in Nonaqueous Regenerative Photoelectrochemical Cells. <i>Journal of Physical Chemistry C</i> , 2009, 113, 11988-11994.	3.1	61
79	Detection of organic vapors and NH ₃ (g) using thin-film carbon black-metallophthalocyanine composite chemiresistors. <i>Sensors and Actuators B: Chemical</i> , 2008, 134, 521-531.	7.8	34
80	SEMICONDUCTOR/LIQUID JUNCTION PHOTOELECTROCHEMICAL SOLAR CELLS. Series on Photoconversion of Solar Energy, 2008, , 537-589.	0.2	2
81	Near-Ideal Photodiodes from Sintered Gold Nanoparticle Films on Methyl-Terminated Si(111) Surfaces. <i>Journal of the American Chemical Society</i> , 2008, 130, 3300-3301.	13.7	49
82	Electrical Properties of Junctions between Hg and Si(111) Surfaces Functionalized with Short-Chain Alkyls. <i>Journal of Physical Chemistry C</i> , 2007, 111, 17690-17699.	3.1	78
83	Surface Modification of Indium Tin Oxide via Electrochemical Reduction of Aryldiazonium Cations. <i>Langmuir</i> , 2006, 22, 2884-2891.	3.5	116
84	Electrochemical oxidation of catecholamines and catechols at carbon nanotube electrodes. <i>Analyst</i> , 2006, 131, 262-267.	3.5	49
85	Structure, composition, and chemical reactivity of carbon nanotubes by selective nitrogen doping. <i>Carbon</i> , 2006, 44, 1429-1437.	10.3	670
86	Synthesis and photophysics of a porphyrin-fullerene dyad assembled through Watson-Crick hydrogen bonding. <i>Chemical Communications</i> , 2005, , 1892-1894.	4.1	114
87	Influence of Nitrogen Doping on Oxygen Reduction Electrocatalysis at Carbon Nanofiber Electrodes. <i>Journal of Physical Chemistry B</i> , 2005, 109, 4707-4716.	2.6	814
88	Direct Preparation of Carbon Nanofiber Electrodes via Pyrolysis of Iron(II) Phthalocyanine: Electrochemical Aspects for Oxygen Reduction. <i>Journal of Physical Chemistry B</i> , 2004, 108, 11375-11383.	2.6	270
89	Synthesis and Characterization of Dendrimer Templated Supported Bimetallic Pt-Au Nanoparticles. <i>Journal of the American Chemical Society</i> , 2004, 126, 12949-12956.	13.7	288
90	Electroreduction of Si(NCO) ₄ for Electrodeposition of Si. <i>Journal of the Electrochemical Society</i> , 0, , .	2.9	1