# Joaquin Rodriguez-Lopez

List of Publications by Year
in descending order



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|---|---|---|---|
| 90 papers | 3,619 citations | 117453 34 h-index | 143772 57 g-index |
| 92 all docs | 92 docs citations | 92 times ranked | 3971 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Insight into the Activity and Selectivity of Nanostructured Copper Titanates during Electrochemical Conversion of CO<sub>2</sub> at Neutral pH via In Situ X-ray Absorption Spectroscopy. ACS Applied Materials & Interfaces, 2022, 14, 2742-2753. | 4.0 | 8 |
| 2 | Mesolytic cleavage of homobenzylic ethers for programmable end-of-life function in redoxmers. Journal of Materials Chemistry A, 2022, 10, 7739-7753. | 5.2 | 6 |
| 3 | Tracking Passivation and Cation Flux at Incipient Solidâ€Electrolyte Interphases on Multiâ€Layer Graphene using High Resolution Scanning Electrochemical Microscopy. ChemElectroChem, 2022, 9, . | 1.7 | 18 |
| 4 | NGenE 2021: Electrochemistry Is Everywhere. ACS Energy Letters, 2022, 7, 368-374. | 8.8 | 6 |
| 5 | Nernstian Li<sup>+</sup> intercalation into few-layer graphene and its use for the determination of K<sup>+</sup> co-intercalation processes. Chemical Science, 2021, 12, 559-568. | 3.7 | 10 |
| 6 | Potential Dependence of the Local pH in a CO<sub>2</sub> Reduction Electrolyzer. ACS Catalysis, 2021, 11, 255-263. | 5.5 | 77 |
| 7 | Surface-Enhanced Raman Spectroscopy-Scanning Electrochemical Microscopy: Observation of Real-Time Surface pH Perturbations. Analytical Chemistry, 2021, 93, 7792-7796. | 3.2 | 12 |
| 8 | Unifying Concepts in Electro- and Thermocatalysis toward Hydrogen Peroxide Production. Journal of the American Chemical Society, 2021, 143, 7940-7957. | 6.6 | 43 |
| 9 | Synergy of DNA intercalation and catalytic activity of a copper complex towards improved polymerase inhibition and cancer cell cytotoxicity. Dalton Transactions, 2021, 50, 11931-11940. | 1.6 | 11 |
| 10 | Reversible Switching of Molecular Conductance in Viologens is Controlled by the Electrochemical Environment. Journal of Physical Chemistry C, 2021, 125, 21862-21872. | 1.5 | 14 |
| 11 | Pt/Polypyrrole Quasi-References Revisited: Robustness and Application in Electrochemical Energy Storage Research. Analytical Chemistry, 2021, 93, 14048-14052. | 3.2 | 8 |
| 12 | Reactive and morphological trends on porous anodic TiO2 substrates obtained at different annealing temperatures. International Journal of Hydrogen Energy, 2020, 45, 4376-4389. | 3.8 | 16 |
| 13 | Quantitative Analysis of DNA-Mediated Formation of Metal Nanocrystals. Journal of the American Chemical Society, 2020, 142, 20368-20379. | 6.6 | 22 |
| 14 | Quantum Chemistry-Informed Active Learning to Accelerate the Design and Discovery of Sustainable Energy Storage Materials. Chemistry of Materials, 2020, 32, 6338-6346. | 3.2 | 50 |
| 15 | Kinetic Control in the Synthesis of a MÃ¶bius Tris((ethynyl)[5]helicene) Macrocycle Using Alkyne Metathesis. Journal of the American Chemical Society, 2020, 142, 6493-6498. | 6.6 | 54 |
| 16 | A combined SECM and electrochemical AFM approach to probe interfacial processes affecting molecular reactivity at redox flow battery electrodes. Journal of Materials Chemistry A, 2020, 8, 15734-15745. | 5.2 | 17 |
| 17 | Versatile electrochemical approaches. Analyst, The, 2020, 145, 5696-5698. | 1.7 | 0 |
| 18 | Impact of Surface Modification on the Lithium, Sodium, and Potassium Intercalation Efficiency and Capacity of Few-Layer Graphene Electrodes. ACS Applied Materials & Interfaces, 2020, 12, 19393-19401. | 4.0 | 16 |

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|---|---|---|---|
| 19 | Coordinated mapping of Li<sup>+</sup> flux and electron transfer reactivity during solid-electrolyte interphase formation at a graphene electrode. Analyst, The, 2020, 145, 2631-2638. | 1.7 | 9 |
| 20 | Impact of Plasmonic Photothermal Effects on the Reactivity of Au Nanoparticle Modified Graphene Electrodes Visualized Using Scanning Electrochemical Microscopy. Analytical Chemistry, 2020, 92, 3666-3673. | 3.2 | 15 |
| 21 | Printing 2D Conjugated Polymer Monolayers and Their Distinct Electronic Properties. Advanced Functional Materials, 2020, 30, 1909787. | 7.8 | 20 |
| 22 | Characterizing intermolecular interactions in redox-active pyridinium-based molecular junctions. Journal of Electroanalytical Chemistry, 2020, 875, 114070. | 1.9 | 13 |
| 23 | Reconstruction of Lead Acid Battery Negative Electrodes after Hard Sulfation Using Controlled Chelation Chemistry. Journal of the Electrochemical Society, 2020, 167, 120537. | 1.3 | 5 |
| 24 | The Chalkboard: Picture Your Electrode: A Primer on Scanning Electrochemical Microscopy. Electrochemical Society Interface, 2020, 29, 30-32. | 0.3 | 1 |
| 25 | Characterization of Terminal Iron(III)â€“Oxo and Iron(III)â€“Hydroxo Complexes Derived from O<sub>2</sub> Activation. Inorganic Chemistry, 2019, 58, 15801-15811. | 1.9 | 24 |
| 26 | Towards a Piezoelectric Electroanalytical Platform for Modulating Oxygen Reduction Reactivity on Platinum. Journal of the Electrochemical Society, 2019, 166, H677-H684. | 1.3 | 4 |
| 27 | Interrogating the Surface Intermediates and Water Oxidation Products of Boronâ€Đoped Diamond Electrodes with Scanning Electrochemical Microscopy. ChemElectroChem, 2019, 6, 3507-3515. | 1.7 | 8 |
| 28 | Synthesis of polypeptides via bioinspired polymerization of in situ purified N -carboxyanhydrides. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10658-10663. | 3.3 | 87 |
| 29 | Scanning electrochemical microscopy with conducting polymer probes: Validation and applications. Analytica Chimica Acta, 2019, 1069, 36-46. | 2.6 | 7 |
| 30 | A Solid-Solution Approach for Redox Active Metalâ€“Organic Frameworks with Tunable Redox Conductivity. Journal of the American Chemical Society, 2019, 141, 19978-19982. | 6.6 | 43 |
| 31 | Probing the reversibility and kinetics of Li<sup>+</sup> during SEI formation and (de)intercalation on edge plane graphite using ion-sensitive scanning electrochemical microscopy. Chemical Science, 2019, 10, 10749-10754. | 3.7 | 27 |
| 32 | Intrachain Charge Transport through Conjugated Donorâ€“Acceptor Oligomers. ACS Applied Electronic Materials, 2019, 1, 7-12. | 2.0 | 25 |
| 33 | Electrocatalysis on ultra-thin 2D electrodes: New concepts and prospects for tailoring reactivity. Current Opinion in Electrochemistry, 2019, 13, 100-106. | 2.5 | 11 |
| 34 | Advanced Electrochemical Analysis for Energy Storage Interfaces. Analytical Chemistry, 2019, 91, 60-83. | 3.2 | 42 |
| 35 | Effect of the Backbone Tether on the Electrochemical Properties of Soluble Cyclopropenium Redox-Active Polymers. Macromolecules, 2018, 51, 3539-3546. | 2.2 | 43 |
| 36 | Modulating Electrocatalysis on Graphene Heterostructures: Physically Impermeable Yet Electronically Transparent Electrodes. ACS Nano, 2018, 12, 2980-2990. | 7.3 | 45 |

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| 37 | In Situ Quantification of Surface Intermediates and Correlation to Discharge Products on Hematite Photoanodes Using a Combined Scanning Electrochemical Microscopy Approach. Analytical Chemistry, 2018, 90, 3050-3057. | 3.2 | 25 |
| 38 | Modulation of the Electrochemical Reactivity of Solubilized Redox Active Polymers via Polyelectrolyte Dynamics. Journal of the American Chemical Society, 2018, 140, 2093-2104. | 6.6 | 30 |
| 39 | Probing Graphene Interfacial Reactivity via Simultaneous and Colocalized Ramanâ€“Scanning Electrochemical Microscopy Imaging and Interrogation. Analytical Chemistry, 2018, 90, 7848-7854. | 3.2 | 34 |
| 40 | Prospects for single-site interrogation using in situ multimodal electrochemical scanning probe techniques. Current Opinion in Electrochemistry, 2018, 8, 89-95. | 2.5 | 7 |
| 41 | Achieving Fast and Efficient K<sup>+</sup> Intercalation on Ultrathin Graphene Electrodes Modified by a Li<sup>+</sup> Based Solid-Electrolyte Interphase. Journal of the American Chemical Society, 2018, 140, 13599-13603. | 6.6 | 54 |
| 42 | Electrochemical Synthesis of Nanostructured Metal-Doped Titanates and Investigation of Their Activity as Oxygen Evolution Photoanodes. ACS Applied Energy Materials, 2018, , . | 2.5 | 4 |
| 43 | Designing Redox-Active Oligomers for Crossover-Free, Nonaqueous Redox-Flow Batteries with High Volumetric Energy Density. Chemistry of Materials, 2018, 30, 3861-3866. | 3.2 | 59 |
| 44 | Impact of Charge Transport Dynamics and Conditioning on Cycling Efficiency within Single Redox Active Colloids. ChemElectroChem, 2018, 5, 3006-3013. | 1.7 | 18 |
| 45 | Cyclic Voltammetry Probe Approach Curves with Alkali Amalgams at Mercury Sphere-Cap Scanning Electrochemical Microscopy Probes. Analytical Chemistry, 2017, 89, 2708-2715. | 3.2 | 10 |
| 46 | Fabrication and Demonstration of Mercury Disc-Well Probes for Stripping-Based Cyclic Voltammetry Scanning Electrochemical Microscopy. Analytical Chemistry, 2017, 89, 2716-2723. | 3.2 | 11 |
| 47 | Detecting Potassium Ion Gradients at a Model Graphitic Interface. Electrochimica Acta, 2017, 241, 98-105. | 2.6 | 16 |
| 48 | Interrogating Charge Storage on Redox Active Colloids via Combined Raman Spectroscopy and Scanning Electrochemical Microscopy. Langmuir, 2017, 33, 9455-9463. | 1.6 | 42 |
| 49 | High-Throughput Preparation of Metal Oxide Nanocrystals by Cathodic Corrosion and Their Use as Active Photocatalysts. Langmuir, 2017, 33, 13295-13302. | 1.6 | 30 |
| 50 | Finding Harmony between Ions and Electrons: New Tools and Concepts for Emerging Energy Storage Materials. Chemistry of Materials, 2017, 29, 8918-8931. | 3.2 | 19 |
| 51 | Assessing the impact of electrolyte conductivity and viscosity on the reactor cost and pressure drop of redox-active polymer flow batteries. Journal of Power Sources, 2017, 361, 334-344. | 4.0 | 31 |
| 52 | Redox Active Polymers for Non-Aqueous Redox Flow Batteries: Validation of the Size-Exclusion Approach. Journal of the Electrochemical Society, 2017, 164, A1688-A1694. | 1.3 | 93 |
| 53 | Impact of electrolyte composition on the reactivity of a redox active polymer studied through surface interrogation and ion-sensitive scanning electrochemical microscopy. Analyst, The, 2016, 141, 3842-3850. | 1.7 | 26 |
| 54 | Scanning Electrochemical Microscopy and Hydrodynamic Voltammetry Investigation of Charge Transfer Mechanisms on Redox Active Polymers. Journal of the Electrochemical Society, 2016, 163, H3006-H3013. | 1.3 | 37 |

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| 55 | Emerging scanning probe approaches to the measurement of ionic reactivity at energy storage materials. Analytical and Bioanalytical Chemistry, 2016, 408, 2707-2715. | 1.9 | 19 |
| 56 | Redox Active Polymers as Soluble Nanomaterials for Energy Storage. Accounts of Chemical Research, 2016, 49, 2649-2657. | 7.6 | 115 |
| 57 | Soft Surfaces for Fast Characterization and Positioning of Scanning Electrochemical Microscopy Nanoelectrode Tips. Analytical Chemistry, 2016, 88, 9897-9901. | 3.2 | 5 |
| 58 | Impact of Backbone Tether Length and Structure on the Electrochemical Performance of Viologen Redox Active Polymers. Chemistry of Materials, 2016, 28, 7362-7374. | 3.2 | 60 |
| 59 | Kinetic Modulation of Outer-Sphere Electron Transfer Reactions on Graphene Electrode with a Sub-surface Metal Substrate. Electrochimica Acta, 2016, 211, 1016-1023. | 2.6 | 37 |
| 60 | Electrochemical Imaging of Photoanodic Water Oxidation Enhancements on TiO<sub>2</sub> Thin Films Modified by Subsurface Aluminum Nanodimers. ACS Nano, 2016, 10, 9346-9352. | 7.3 | 32 |
| 61 | Redox Active Colloids as Discrete Energy Storage Carriers. Journal of the American Chemical Society, 2016, 138, 13230-13237. | 6.6 | 111 |
| 62 | Structure of the Photo-catalytically Active Surface of SrTiO<sub>3</sub>. Journal of the American Chemical Society, 2016, 138, 7816-7819. | 6.6 | 64 |
| 63 | Layer Number Dependence of Li<sup>+</sup> Intercalation on Few-Layer Graphene and Electrochemical Imaging of Its Solidâ€“Electrolyte Interphase Evolution. ACS Nano, 2016, 10, 4248-4257. | 7.3 | 78 |
| 64 | Redox Titrations via Surface Interrogation Scanning Electrochemical Microscopy at an Extended Semiconducting Surface for the Quantification of Photogenerated Adsorbed Intermediates. Electrochimica Acta, 2015, 179, 74-83. | 2.6 | 28 |
| 65 | Rapid Characterization of Oxygen-Evolving Electrocatalyst Spot Arrays by the Substrate Generation/Tip Collection Mode of Scanning Electrochemical Microscopy with Decreased O<sub>2</sub> Diffusion Layer Overlap. Journal of Physical Chemistry C, 2015, 119, 2941-2947. | 1.5 | 16 |
| 66 | On-chip metal/polypyrrole quasi-reference electrodes for robust ISFET operation. Analyst, The, 2015, 140, 3630-3641. | 1.7 | 23 |
| 67 | Single-Layer Graphene as a Stable and Transparent Electrode for Nonaqueous Radical Annihilation Electrogenerated Chemiluminescence. Langmuir, 2015, 31, 3999-4007. | 1.6 | 23 |
| 68 | Evolutionary Design of Low Molecular Weight Organic Anolyte Materials for Applications in Nonaqueous Redox Flow Batteries. Journal of the American Chemical Society, 2015, 137, 14465-14472. | 6.6 | 191 |
| 69 | Electrochemical Imaging and Redox Interrogation of Surface Defects on Operating SrTiO<sub>3</sub> Photoelectrodes. Journal of the American Chemical Society, 2015, 137, 14865-14868. | 6.6 | 30 |
| 70 | Single layer graphene as an electrochemical platform. Faraday Discussions, 2014, 172, 27-45. | 1.6 | 11 |
| 71 | Lithium Ion Quantification Using Mercury Amalgams as in Situ Electrochemical Probes in Nonaqueous Media. Analytical Chemistry, 2014, 86, 10660-10667. | 3.2 | 50 |
| 72 | Impact of Redox-Active Polymer Molecular Weight on the Electrochemical Properties and Transport Across Porous Separators in Nonaqueous Solvents. Journal of the American Chemical Society, 2014, 136, 16309-16316. | 6.6 | 172 |

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| 73 | Kinetics of Interfacial Electron Transfer at Single-Layer Graphene Electrodes in Aqueous and Nonaqueous Solutions. Langmuir, 2013, 29, 1683-1694. | 1.6 | 106 |
| 74 | Quantification of the Surface Diffusion of Tripodal Binding Motifs on Graphene Using Scanning Electrochemical Microscopy. Journal of the American Chemical Society, 2012, 134, 6224-6236. | 6.6 | 56 |
| 75 | Reactivity of Monolayer Chemical Vapor Deposited Graphene Imperfections Studied Using Scanning Electrochemical Microscopy. ACS Nano, 2012, 6, 3070-3079. | 7.3 | 115 |
| 76 | Scanning Electrochemical Microscopy Study of Ion Annihilation Electrogenerated Chemiluminescence of Rubrene and [Ru(bpy)<sub>3</sub>]<sup>2+</sup>. Journal of the American Chemical Society, 2012, 134, 9240-9250. | 6.6 | 33 |
| 77 | Quantification of photoelectrogenerated hydroxyl radical on TiO2 by surface interrogation scanning electrochemical microscopy. Physical Chemistry Chemical Physics, 2012, 14, 12764. | 1.3 | 78 |
| 78 | Multivalent Binding Motifs for the Noncovalent Functionalization of Graphene. Journal of the American Chemical Society, 2011, 133, 17614-17617. | 6.6 | 149 |
| 79 | Evaluation of the Chemical Reactions from Two Electrogenerated Species in Picoliter Volumes by Scanning Electrochemical Microscopy. ChemPhysChem, 2010, 11, 2969-2978. | 1.0 | 8 |
| 80 | Reaction of Various Reductants with Oxide Films on Pt Electrodes As Studied by the Surface Interrogation Mode of Scanning Electrochemical Microscopy (SI-SECM): Possible Validity of a Marcus Relationship. Journal of Physical Chemistry C, 2010, 114, 18645-18655. | 1.5 | 52 |
| 81 | Electrochemistry and Electrogenerated Chemiluminescence of a Novel Donorâ^'Acceptor FPhSPFN Red Fluorophore. Journal of Physical Chemistry C, 2010, 114, 9772-9780. | 1.5 | 21 |
| 82 | Electrochemistry and Electrogenerated Chemiluminescence of Dithienylbenzothiadiazole Derivative. Differential Reactivity of Donor and Acceptor Groups and Simulations of Radical Cationâ^'Anion and Dicationâ^'Radical Anion Annihilations. Journal of the American Chemical Society, 2010, 132, 13453-13461. | 6.6 | 63 |
| 83 | Scanning Electrochemical Microscopy: Surface Interrogation of Adsorbed Hydrogen and the Open Circuit Catalytic Decomposition of Formic Acid at Platinum. Journal of the American Chemical Society, 2010, 132, 5121-5129. | 6.6 | 67 |
| 84 | Reaction of Br<sub>2</sub> with Adsorbed CO on Pt, Studied by the Surface Interrogation Mode of Scanning Electrochemical Microscopy. Journal of the American Chemical Society, 2009, 131, 17046-17047. | 6.6 | 41 |
| 85 | Micropipet Deliveryâ^'Substrate Collection Mode of Scanning Electrochemical Microscopy for the Imaging of Electrochemical Reactions and the Screening of Methanol Oxidation Electrocatalysts. Analytical Chemistry, 2009, 81, 8868-8877. | 3.2 | 29 |
| 86 | Electrocatalytic Activity of Pdâ^'Co Bimetallic Mixtures for Formic Acid Oxidation Studied by Scanning Electrochemical Microscopy. Analytical Chemistry, 2009, 81, 7003-7008. | 3.2 | 79 |
| 87 | Interrogation of Surfaces for the Quantification of Adsorbed Species on Electrodes: Oxygen on Gold and Platinum in Neutral Media. Journal of the American Chemical Society, 2008, 130, 16985-16995. | 6.6 | 135 |
| 88 | Scanning Electrochemical Microscopy. 60. Quantitative Calibration of the SECM Substrate Generation/Tip Collection Mode and Its Use for the Study of the Oxygen Reduction Mechanism. Analytical Chemistry, 2008, 80, 3254-3260. | 3.2 | 136 |
| 89 | Selective Insulation with Poly(tetrafluoroethylene) of Substrate Electrodes for Electrochemical Background Reduction in Scanning Electrochemical Microscopy. Analytical Chemistry, 2008, 80, 1813-1818. | 3.2 | 21 |
| 90 | Scanning electrochemical microscopy: a versatile tool for inspecting the reactivity of battery electrodes. , 0, , . | | 2 |