Alain R Puente-Santiago

List of Publications by Year
in descending order

60	2,484	236925 25	206112 48
papers	citations	h-index	g-index

65	65	65	2659
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Tuning of Trifunctional NiCu Bimetallic Nanoparticles Confined in a Porous Carbon Network with Surface Composition and Local Structural Distortions for the Electrocatalytic Oxygen Reduction, Oxygen and Hydrogen Evolution Reactions. Journal of the American Chemical Society, 2020, 142, 14688-14701.	13.7	231
2	Coâ€“Cu Bimetallic Metal Organic Framework Catalyst Outperforms the Pt/C Benchmark for Oxygen Reduction. Journal of the American Chemical Society, 2021, 143, 4064-4073.	13.7	175
3	Tuning the Intermolecular Electron Transfer of Low-Dimensional and Metal-Free BCN/C₆₀ Electrocatalysts via Interfacial Defects for Efficient Hydrogen and Oxygen Electrochemistry. Journal of the American Chemical Society, 2021, 143, 1203-1215.	13.7	140
4	Mechanochemistry: Toward Sustainable Design of Advanced Nanomaterials for Electrochemical Energy Storage and Catalytic Applications. ACS Sustainable Chemistry and Engineering, 2018, 6, 9530-9544.	6.7	130
5	Atomically embedded asymmetrical dual-metal dimers on N-doped graphene for ultra-efficient nitrogen reduction reaction. Journal of Catalysis, 2020, 388, 77-83.	6.2	123
6	Tailoring the Interfacial Interactions of van der Waals 1T-MoS₂/C₆₀ Heterostructures for High-Performance Hydrogen Evolution Reaction Electrocatalysis. Journal of the American Chemical Society, 2020, 142, 17923-17927.	13.7	112
7	Environmental Catalysis: Present and Future. ChemCatChem, 2019, 11, 18-38.	3.7	87
8	Non-porous carbonaceous materials derived from coffee waste grounds as highly sustainable anodes for lithium-ion batteries. Journal of Cleaner Production, 2019, 207, 411-417.	9.3	85
9	Atomically Dispersed Heteronuclear Dualâ€Atom Catalysts: A New Rising Star in Atomic Catalysis. Small, 2022, 18, e2106091.	10.0	78
10	Benign-by-design nature-inspired nanosystems in biofuels production and catalytic applications. Renewable and Sustainable Energy Reviews, 2019, 112, 195-252.	16.4	76
11	Fullerenes as Key Components for Lowâ€Dimensional (Photo)electrocatalytic Nanohybrid Materials. Angewandte Chemie - International Edition, 2021, 60, 122-141.	13.8	64
12	Controlling the Interfacial Charge Polarization of MOF-Derived 0Dâ€“2D vdW Architectures as a Unique Strategy for Bifunctional Oxygen Electrocatalysis. ACS Applied Materials & Interfaces, 2022, 14, 3919-3929.	8.0	63
13	Low-dimensional heterostructures for advanced electrocatalysis: an experimental and computational perspective. Chemical Society Reviews, 2022, 51, 812-828.	38.1	62
14	Biomass-derived ultrathin carbon-shell coated iron nanoparticles as high-performance tri-functional HER, ORR and Fenton-like catalysts. Journal of Cleaner Production, 2020, 275, 124141.	9.3	54
15	Nanomaterials and catalysis for green chemistry. Current Opinion in Green and Sustainable Chemistry, 2020, 24, 48-55.	5.9	53
16	Nature-inspired hierarchical materials for sensing and energy storage applications. Chemical Society Reviews, 2021, 50, 4856-4871.	38.1	49
17	Microwave-assisted preparation of Ag/Ag₂S carbon hybrid structures from pig bristles as efficient HER catalysts. Journal of Materials Chemistry A, 2018, 6, 21516-21523.	10.3	48
18	Tailoring the ORR and HER electrocatalytic performances of gold nanoparticles through metalâ€“ligand interfaces. Journal of Materials Chemistry A, 2019, 7, 20425-20434.	10.3	45

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19	Citrate-Stabilized Gold Nanoparticles as High-Performance Electrocatalysts: The Role of Size in the Electroreduction of Oxygen. Journal of Physical Chemistry C, 2019, 123, 9807-9812.	3.1	40
20	Tissue paper-derived porous carbon encapsulated transition metal nanoparticles as advanced non-precious catalysts: Carbon-shell influence on the electrocatalytic behaviour. Journal of Colloid and Interface Science, 2021, 581, 905-918.	9.4	39
21	Benign-by-Design Orange Peel-Templated Nanocatalysts for Continuous Flow Conversion of Levulinic Acid to N-Heterocycles. ACS Sustainable Chemistry and Engineering, 2018, 6, 16637-16644.	6.7	38
22	Spent tea leaves templated synthesis of highly active and durable cobalt-based trifunctional versatile electrocatalysts for hydrogen and oxygen evolution and oxygen reduction reactions. Green Chemistry, 2020, 22, 6967-6980.	9.0	38
23	A New Class of Molecular Electrocatalysts for Hydrogen Evolution: Catalytic Activity of M₃N@C_{2n} (2n = 68, 78, and 80) Fullerenes. Journal of the American Chemical Society, 2021, 143, 6037-6042.	13.7	37
24	Synthesis of carbon-based fluorescent polymers driven by catalytically active magnetic bioconjugates. Green Chemistry, 2018, 20, 225-229.	9.0	34
25	Highly efficient direct oxygen electro-reduction by partially unfolded laccases immobilized on waste-derived magnetically separable nanoparticles. Nanoscale, 2018, 10, 3961-3968.	5.6	31
26	Solventless mechanochemical preparation of novel magnetic bioconjugates. Chemical Communications, 2017, 53, 7635-7637.	4.1	26
27	Controllable Design of Polypyrrole-Iron Oxide Nanocoral Architectures for Supercapacitors with Ultrahigh Cycling Stability. ACS Applied Energy Materials, 2019, 2, 2161-2168.	5.1	25
28	Experimental and Theoretical Advances on Single Atom and Atomic Clusterâ€Decorated Lowâ€Dimensional Platforms towards Superior Electrocatalysts. Advanced Energy Materials, 2022, 12, .	19.5	25
29	Versatile Protein-Templated TiO₂ Nanocomposite for Energy Storage and Catalytic Applications. ACS Sustainable Chemistry and Engineering, 2019, 7, 5329-5337.	6.7	24
30	Tuning CO binding strengthviaengineering the copper/borophene interface for highly efficient conversion of CO into ethanol. Journal of Materials Chemistry A, 2021, 9, 13192-13199.	10.3	23
31	Unravelling the Reaction Mechanisms of N₂ Fixation on Molybdenum Nitride: A Full DFT Study from the Pristine Surface to Heteroatom Anchoring. ChemSusChem, 2021, 14, 3257-3266.	6.8	22
32	Crystallographic Characterization of U@C_{2n} (2n = 82â€“86): Insights about Metalâ€“Cage Interactions for Mono-metallofullerenes. Journal of the American Chemical Society, 2021, 143, 15309-15318.	13.7	22
33	Continuous Flow Synthesis of High Valuable N-Heterocycles via Catalytic Conversion of Levulinic Acid. Frontiers in Chemistry, 2019, 7, 103.	3.6	21
34	Unprecedented Wiring Efficiency of Sulfonated Graphitic Carbon Nitride Materials: Toward High-Performance Amperometric Recombinant CotA Laccase Biosensors. ACS Sustainable Chemistry and Engineering, 2019, 7, 1474-1484.	6.7	21
35	Improving the electrocatalytic performance of sustainable Co/carbon materials for the oxygen evolution reaction by ultrasound and microwave assisted synthesis. Sustainable Energy and Fuels, 2021, 5, 720-731.	4.9	21
36	Sunlightâ€Driven Hydrogen Production Using an Annular Flow Photoreactor and gâ€C₃N₄â€Based Catalysts. ChemPhotoChem, 2018, 2, 870-877.	3.0	20

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37	Efficient Mechanochemical Bifunctional Nanocatalysts for the Conversion of Isoeugenol to Vanillin. Frontiers in Chemistry, 2018, 6, 77.	3.6	20
38	Improving Electrochemical Hydrogen Evolution of Ag@CN Nanocomposites by Synergistic Effects with Î±-Rich Proteins. ACS Applied Materials & Interfaces, 2020, 12, 2207-2215.	8.0	20
39	The role of fullerene derivatives in perovskite solar cells: electron transporting or electron extraction layers?. Journal of Materials Chemistry C, 2021, 9, 10759-10767.	5.5	20
40	Facile synthesis of C₆₀-nano materials and their application in high-performance water splitting electrocatalysis. Sustainable Energy and Fuels, 2020, 4, 2900-2906.	4.9	19
41	Mechanochemical design of hemoglobin-functionalised magnetic nanomaterials for energy storage devices. Journal of Materials Chemistry A, 2017, 5, 16404-16411.	10.3	18
42	Encapsulated Laccases as Effective Electrocatalysts for Oxygen Reduction Reactions. ACS Sustainable Chemistry and Engineering, 2018, 6, 11058-11062.	6.7	18
43	Graphynes as emerging 2D-platforms for electronic and energy applications: a computational perspective. Materials Chemistry Frontiers, 2021, 5, 6392-6412.	5.9	17
44	Solvent-Free Preparation of 1,8-Dioxo-Octahydroxanthenes Employing Iron Oxide Nanomaterials. Materials, 2019, 12, 2386.	2.9	16
45	Copper Tridentate Schiff Base Complex Supported on SBA-15 as Efficient Nanocatalyst for Three-Component Reactions under Solventless Conditions. Materials, 2018, 11, 2458.	2.9	15
46	Boosting the electrochemical oxygen reduction activity of hemoglobin on fructose@graphene-oxide nanoplatforms. Chemical Communications, 2019, 55, 4671-4674.	4.1	15
47	Influence of Patterning in the Acidâ€“Base Interfacial Properties of Homogeneously Mixed CH₃- and COOH-Terminated Self-Assembled Monolayers. Journal of Physical Chemistry C, 2018, 122, 2854-2865.	3.1	14
48	Metal-Organic frameworks-derived multifunctional carbon encapsulated metallic nanocatalysts for catalytic peroxymonosulfate activation and electrochemical hydrogen generation. Molecular Catalysis, 2020, 498, 111241.	2.0	13
49	In Situ Aniline-Polymerized Interfaces on GOâ€“PVA Nanoplatforms as Bifunctional Supercapacitors and pH-Universal ORR Electrodes. ACS Applied Energy Materials, 2020, 3, 4727-4737.	5.1	13
50	Diazonium functionalized fullerenes: a new class of efficient molecular catalysts for the hydrogen evolution reaction. Nanoscale, 2022, 14, 3858-3864.	5.6	12
51	Fullerenes as Key Components for Lowâ€Đimensional (Photo)electrocatalytic Nanohybrid Materials. Angewandte Chemie, 2021, 133, 124-143.	2.0	11
52	Mechanochemically Synthetized PAN-Based Co-N-Doped Carbon Materials as Electrocatalyst for Oxygen Evolution Reaction. Nanomaterials, 2021, 11, 290.	4.1	10
53	Mimicking the bioelectrocatalytic function of recombinant CotA laccase through electrostatically self-assembled bioconjugates. Nanoscale, 2019, 11, 1549-1554.	5.6	9
54	Formation of 2-D Crystalline Intermixed Domains at the Molecular Level in Binary Self-Assembled Monolayers from a Lyotropic Mixture. Journal of Physical Chemistry C, 2016, 120, 8595-8606.	3.1	7

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55	Cytosine Palladium Hybrid Complex Immobilized on SBAâ€15 as Efficient Heterogeneous Catalyst for the Aqueous Suzukiâ€Miyaura Coupling. ChemistrySelect, 2018, 3, 6102-6106.	1.5	5
56	Benign-by-design nature-inspired bionanoconjugates for energy conversion and storage applications. Current Opinion in Green and Sustainable Chemistry, 2020, 26, 100373.	5.9	5
57	Proteins-Based Nanocatalysts for Energy Conversion Reactions. Topics in Current Chemistry, 2020, 378, 43.	5.8	3
58	Computational Study of the Curvature-Promoted Anchoring of Transition Metals for Water Splitting. Nanomaterials, 2021, 11, 3173.	4.1	3
59	Cylindrical C ₉₆ Fullertubes: A Highly Active Metalâ€Free O ₂ â€Reduction Electrocatalyst. Angewandte Chemie, 0, , .	2.0	3
60	Proteins-based nanocatalyts for energy conversion reactions. Topics in Current Chemistry Collections, 2020, , 237-255.	0.5	1