Ivana Matanovic

List of Publications by Year
in descending order

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70 papers	3,409 citations	136740 32 h-index	143772 57 g-index
76 all docs	76 docs citations	76 times ranked	4133 citing authors

#	Article	IF	Citations
1	Identification of durable and non-durable FeNx sites in Feâ€“Nâ€“C materials for proton exchange membrane fuel cells. Nature Catalysis, 2021, 4, 10-19.	16.1	368
2	Rational design of polyaromatic ionomers for alkaline membrane fuel cells with >1 W cm^{â^'2} power density. Energy and Environmental Science, 2018, 11, 3283-3291.	15.6	209
3	Understanding Active Sites in Pyrolyzed Feâ€“Nâ€“C Catalysts for Fuel Cell Cathodes by Bridging Density Functional Theory Calculations and ⁵⁷Fe MÃ¶ssbauer Spectroscopy. ACS Catalysis, 2019, 9, 9359-9371.	5.5	167
4	Effect of pH on the Activity of Platinum Group Metal-Free Catalysts in Oxygen Reduction Reaction. ACS Catalysis, 2018, 8, 3041-3053.	5.5	158
5	Oxygen Binding to Active Sites of Feâ€“Nâ€“C ORR Electrocatalysts Observed by Ambient-Pressure XPS. Journal of Physical Chemistry C, 2017, 121, 2836-2843.	1.5	135
6	Air Breathing Cathodes for Microbial Fuel Cell using Mn-, Fe-, Co- and Ni-containing Platinum Group Metal-free Catalysts. Electrochimica Acta, 2017, 231, 115-124.	2.6	131
7	Core Level Shifts of Hydrogenated Pyridinic and Pyrrolic Nitrogen in the Nitrogen-Containing Graphene-Based Electrocatalysts: In-Plane vs Edge Defects. Journal of Physical Chemistry C, 2016, 120, 29225-29232.	1.5	123
8	Synergistically integrated phosphonated poly(pentafluorostyrene) for fuel cells. Nature Materials, 2021, 20, 370-377.	13.3	112
9	CuCo₂O₄ORR/OER Bi-Functional Catalyst: Influence of Synthetic Approach on Performance. Journal of the Electrochemical Society, 2015, 162, F449-F454.	1.3	104
10	Predicting Electrocatalytic Properties: Modeling Structureâ€“Activity Relationships of Nitroxyl Radicals. Journal of the American Chemical Society, 2015, 137, 16179-16186.	6.6	91
11	Adsorption of Polyaromatic Backbone Impacts the Performance of Anion Exchange Membrane Fuel Cells. Chemistry of Materials, 2019, 31, 4195-4204.	3.2	91
12	Understanding PGM-free catalysts by linking density functional theory calculations and structural analysis: Perspectives and challenges. Current Opinion in Electrochemistry, 2018, 9, 137-144.	2.5	85
13	The energetics of phosphoric acid interactions reveals a new acid loss mechanism. Journal of Materials Chemistry A, 2019, 7, 9867-9876.	5.2	83
14	Theoretical Study of Electrochemical Processes on Ptâ€“Ni Alloys. Journal of Physical Chemistry C, 2011, 115, 10640-10650.	1.5	79
15	Phenyl Oxidation Impacts the Durability of Alkaline Membrane Water Electrolyzer. ACS Applied Materials & Interfaces, 2019, 11, 9696-9701.	4.0	79
16	Protonated phosphonic acid electrodes for high power heavy-duty vehicle fuel cells. Nature Energy, 2022, 7, 248-259.	19.8	65
17	Highly-active Pdâ€“Cu electrocatalysts for oxidation of ubiquitous oxygenated fuels. Applied Catalysis B: Environmental, 2016, 191, 76-85.	10.8	61
18	Highly active and selective nickel molybdenum catalysts for direct hydrazine fuel cell. Electrochimica Acta, 2016, 215, 420-426.	2.6	59

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19	Investigating the Nature of the Active Sites for the CO₂ Reduction Reaction on Carbon-Based Electrocatalysts. ACS Catalysis, 2019, 9, 7668-7678.	5.5	58
20	Highly Durable and Selective Fe- and Mo-Based Atomically Dispersed Electrocatalysts for Nitrate Reduction to Ammonia via Distinct and Synergized NO₂^{â€“} Pathways. ACS Catalysis, 2022, 12, 6651-6662.	5.5	58
21	Cationâ€“Hydroxideâ€“Water Coadsorption Inhibits the Alkaline Hydrogen Oxidation Reaction. Journal of Physical Chemistry Letters, 2016, 7, 4464-4469.	2.1	57
22	Electro-reduction of nitrogen on molybdenum nitride: structure, energetics, and vibrational spectra from DFT. Physical Chemistry Chemical Physics, 2014, 16, 3014.	1.3	55
23	Benzene Adsorption: A Significant Inhibitor for the Hydrogen Oxidation Reaction in Alkaline Conditions. Journal of Physical Chemistry Letters, 2017, 8, 4918-4924.	2.1	55
24	Nitrogen electroreduction and hydrogen evolution on cubic molybdenum carbide: a density functional study. Physical Chemistry Chemical Physics, 2018, 20, 14679-14687.	1.3	55
25	Impact of ionomer adsorption on alkaline hydrogen oxidation activity and fuel cell performance. Current Opinion in Electrochemistry, 2018, 12, 189-195.	2.5	55
26	Surface Adsorption Affects the Performance of Alkaline Anion-Exchange Membrane Fuel Cells. ACS Catalysis, 2018, 8, 9429-9439.	5.5	55
27	Mechanism of Oxygen Reduction Reaction on Transition Metalâ€“Nitrogenâ€“Carbon Catalysts: Establishing the Role of Nitrogen-containing Active Sites. ACS Applied Energy Materials, 2018, 1, 5948-5953.	2.5	54
28	Role of Surface Chemistry on Catalyst/Ionomer Interactions for Transition Metalâ€“Nitrogenâ€“Carbon Electrocatalysts. ACS Applied Energy Materials, 2018, 1, 68-77.	2.5	44
29	Effect of enzymatic orientation through the use of syringaldazine molecules on multiple multi-copper oxidase enzymes. Physical Chemistry Chemical Physics, 2014, 16, 13367-13375.	1.3	39
30	Understanding the Oxygen Reduction Reaction Activity and Oxidative Stability of Pt Supported on Nbâ€Đoped TiO₂. ChemSusChem, 2019, 12, 3468-3480.	3.6	39
31	Role of Quinones in Electron Transfer of PQQâ€“Glucose Dehydrogenase Anodesâ€”Mediation or Orientation Effect. Journal of the American Chemical Society, 2015, 137, 7754-7762.	6.6	34
32	Tolerance of non-platinum group metals cathodes proton exchange membrane fuel cells to air contaminants. Journal of Power Sources, 2016, 324, 556-571.	4.0	34
33	Exploring the potential energy surface for proton transfer in acetylacetone. Chemical Physics, 2004, 306, 201-207.	0.9	31
34	Effect of Organic Cations on Hydrogen Oxidation Reaction of Carbon Supported Platinum. Journal of the Electrochemical Society, 2016, 163, F1503-F1509.	1.3	29
35	Generalized approximation to the reaction path: The formic acid dimer case. Journal of Chemical Physics, 2008, 128, 084103.	1.2	26
36	Bio-inspired design of electrocatalysts for oxalate oxidation: a combined experimental and computational study of Mnâ€“Nâ€“C catalysts. Physical Chemistry Chemical Physics, 2015, 17, 13235-13244.	1.3	26

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37	Proteinâ€“Support Interactions for Rationally Designed Bilirubin Oxidase Based Cathode: A Computational Study. Journal of Physical Chemistry B, 2016, 120, 3634-3641.	1.2	24
38	Outer membrane cytochromes/flavin interactions in Shewanella spp.â€”A molecular perspective. Biointerphases, 2017, 12, 021004.	0.6	24
39	Sulfur Ylide Promoted Synthesis of Nâ€Protected Aziridines: A Combined Experimental and Computational Approach. Chemistry - A European Journal, 2010, 16, 11744-11752.	1.7	23
40	Hybrid molecular/enzymatic catalytic cascade for complete electro-oxidation of glycerol using a promiscuous NAD-dependent formate dehydrogenase from Candida boidinii. Chemical Communications, 2017, 53, 5368-5371.	2.2	23
41	Energetics of Baseâ€“Acid Pairs for the Design of High-Temperature Fuel Cell Polymer Electrolytes. Journal of Physical Chemistry B, 2020, 124, 7725-7734.	1.2	23
42	Theoretical modeling of the formic acid dimer infrared spectrum: Shaping the Oâ€“H stretch band. Chemical Physics, 2007, 338, 121-126.	0.9	22
43	Methane molecule confined in the small and large cages of structure I clathrate hydrate: Quantum six-dimensional calculations of the coupled translation-rotation eigenstates. Journal of Chemical Physics, 2009, 131, 224308.	1.2	20
44	Design of Pd-Pb Catalysts for Glycerol and Ethylene Glycol Electrooxidation in Alkaline Medium. Electrocatalysis, 2018, 9, 480-485.	1.5	20
45	Density Functional Theory Study of Oxygen Reduction Activity on Ultrathin Platinum Nanotubes. Journal of Physical Chemistry C, 2012, 116, 16499-16510.	1.5	18
46	Inhibition of Surface Chemical Moieties by Tris(hydroxymethyl)aminomethane: A Key to Understanding Oxygen Reduction on Ironâ€“Nitrogenâ€“Carbon Catalysts. ACS Applied Energy Materials, 2018, 1, 1942-1949.	2.5	18
47	Self-Anchored Platinum-Decorated Antimony-Doped-Tin Oxide as a Durable Oxygen Reduction Electrocatalyst. ACS Catalysis, 2021, 11, 7006-7017.	5.5	17
48	Towards defect engineering in hexagonal MoS2 nanosheets for tuning hydrogen evolution and nitrogen reduction reactions. Applied Materials Today, 2020, 21, 100812.	2.3	16
49	Fluxionality of Hydrogen Ligands in Fe(H)₂(H₂)(PEtPh₂)₃. Inorganic Chemistry, 2011, 50, 10740-10747.	1.9	15
50	Bergman Cyclization of Acyclic Amino Acid Derived Enediynes Leads to the Formation of 2,3-Dihydrobenzo[f]isoindoles. Journal of Organic Chemistry, 2010, 75, 6219-6228.	1.7	14
51	Quinoneâ€Modified Surfaces for Enhanced Enzymeâ€“Electrode Interactions in Pyrroloquinolineâ€Quinoneâ€Dependent Glucose Dehydrogenase Anodes. ChemElectroChem, 2014, 1, 2017-2028.	1.7	14
52	Cascade Kinetics of an Artificial Metabolon by Molecular Dynamics and Kinetic Monte Carlo. ACS Catalysis, 2018, 8, 7719-7726.	5.5	13
53	Facile All-Optical Method for In Situ Detection of Low Amounts of Ammonia. IScience, 2020, 23, 101757.	1.9	12
54	Robust palladium hydride catalyst for electrocatalytic formate formation with high CO tolerance. Applied Catalysis B: Environmental, 2022, 316, 121659.	10.8	11

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55	The study of secondary effects in vibrational and hydrogen bonding properties of 2- and 3-ethynylpyridine and ethynylbenzene by IR spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2014, 132, 215-224.	2.0	10
56	Spectroâ€Electrochemical Microfluidic Platform for Monitoring Multiâ€Step Cascade Reactions. ChemElectroChem, 2019, 6, 246-251.	1.7	10
57	Supramolecular amide and thioamide synthons in hydrogen bonding patterns of N-aryl-furamides and N-aryl-thiofuramides. Structural Chemistry, 2006, 17, 275-285.	1.0	9
58	Modular Microfluidic Paperâ€Based Devices for Multiâ€Modal Cascade Catalysis. ChemElectroChem, 2019, 6, 2448-2455.	1.7	8
59	First principles inelastic mean free paths coupled with Monte Carlo simulation of secondary electron yield of Cu-Ni, Cu-Zn, and Mo-Li. Journal of Applied Physics, 2021, 129, .	1.1	8
60	Assessing Stability of Transition Metal Nitrides in Aqueous Environments: The Case of Molybdenum, Iron, Vanadium and Nickel Nitride. Journal of the Electrochemical Society, 2020, 167, 046518.	1.3	7
61	Functional interfaces for biomimetic energy harvesting: CNTs-DNA matrix for enzyme assembly. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 612-620.	0.5	5
62	Novel Hybrid Catalyst for the Oxidation of Organic Acids: Pd Nanoparticles Supported on Mnâ€Nâ€3Dâ€Graphene Nanosheets. ChemElectroChem, 2017, 4, 2336-2344.	1.7	5
63	Selectivity control for electroreduction of ketones. Nature Catalysis, 2019, 2, 186-187.	16.1	5
64	Evaluation of Pt Alloys as Electrocatalysts for Oxalic Acid Oxidation: A Combined Experimental and Computational Study. Journal of the Electrochemical Society, 2016, 163, H787-H795.	1.3	4
65	Thermochemical analysis of Mo-C-H system for synthesis of molybdenum carbides. Thermochimica Acta, 2019, 676, 27-32.	1.2	4
66	Applicability of density functional theory in reproducing accurate vibrational spectra of surface bound species. Journal of Computational Chemistry, 2014, 35, 1921-1929.	1.5	2
67	Understanding the Oxygen Reduction Reaction Activity and Oxidative Stability of Pt Supported on Nbâ€Doped TiO 2. ChemSusChem, 2019, 12, 3409-3409.	3.6	0
68	Protocol for rapid ammonia detection via surface-enhanced Raman spectroscopy. STAR Protocols, 2021, 2, 100599.	0.5	0
69	Electro-Reduction of Nitrogen on Molybdenum Carbides: A Density Functional Theory Study. ECS Meeting Abstracts, 2018, , .	0.0	0
70	Calculation of Secondary Electron Yield of Alloys: Single Pole Approximation. , 2021, , .		0