Nirala Singh

List of Publications by Year
in descending order

41 papers	3,327 citations	236925 25 h-index	254184 43 g-index
43 all docs	43 docs citations	43 times ranked	4844 citing authors

#	Article	IF	Citations
1	Explaining the structure sensitivity of Pt and Rh for aqueous-phase hydrogenation of phenol. Journal of Chemical Physics, 2022, 156, 104703.	3.0	7
2	Near-Quantitative Predictions of the First-Shell Coordination Structure of Hydrated First-Row Transition Metal Ions Using K-Edge X-ray Absorption Near-Edge Spectroscopy. Journal of Physical Chemistry Letters, 2022, 13, 6323-6330.	4.6	6
3	Temperature dependence of aqueous-phase phenol adsorption on Pt and Rh. Journal of Applied Electrochemistry, 2021, 51, 37-50.	2.9	6
4	Comparing electrocatalytic and thermocatalytic conversion of nitrate on platinumâ€“ruthenium alloys. Catalysis Science and Technology, 2021, 11, 7098-7109.	4.1	18
5	Why halides enhance heterogeneous metal ion charge transfer reactions. Chemical Science, 2021, 12, 12704-12710.	7.4	6
6	Recent discoveries in the reaction mechanism of heterogeneous electrocatalytic nitrate reduction. Catalysis Science and Technology, 2021, 11, 705-725.	4.1	114
7	The Effect of Anion Bridging on Heterogeneous Charge Transfer for V2+/V3+. Cell Reports Physical Science, 2021, 2, 100307.	5.6	9
8	Increasing electrocatalytic nitrate reduction activity by controlling adsorption through PtRu alloying. Journal of Catalysis, 2021, 395, 143-154.	6.2	94
9	Electrocatalytic nitrate reduction on rhodium sulfide compared to Pt and Rh in the presence of chloride. Catalysis Science and Technology, 2021, 11, 7331-7346.	4.1	13
10	Effects of Solvents on Adsorption Energies: A General Bond-Additivity Model. Journal of Physical Chemistry C, 2021, 125, 24371-24380.	3.1	14
11	Electrocatalytic Hydrogenation of Biomass-Derived Organics: A Review. Chemical Reviews, 2020, 120, 11370-11419.	47.7	185
12	Structures and Free Energies of Cerium Ions in Acidic Electrolytes. Inorganic Chemistry, 2020, 59, 12552-12563.	4.0	14
13	Role of Electrocatalysis in the Remediation of Water Pollutants. ACS Catalysis, 2020, 10, 3365-3371.	11.2	88
14	Aqueous phase catalytic and electrocatalytic hydrogenation of phenol and benzaldehyde over platinum group metals. Journal of Catalysis, 2020, 382, 372-384.	6.2	68
15	Adsorption Energies of Oxygenated Aromatics and Organics on Rhodium and Platinum in Aqueous Phase. ACS Catalysis, 2020, 10, 4929-4941.	11.2	37
16	A Simple Bond-Additivity Model Explains Large Decreases in Heats of Adsorption in Solvents Versus Gas Phase: A Case Study with Phenol on Pt(111) in Water. ACS Catalysis, 2019, 9, 8116-8127.	11.2	52
17	V²⁺/V³⁺ Redox Kinetics on Glassy Carbon in Acidic Electrolytes for Vanadium Redox Flow Batteries. ACS Energy Letters, 2019, 4, 2368-2377.	17.4	36
18	Activity and Selectivity Trends in Electrocatalytic Nitrate Reduction on Transition Metals. ACS Catalysis, 2019, 9, 7052-7064.	11.2	369

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19	Quantifying Adsorption of Organic Molecules on Platinum in Aqueous Phase by Hydrogen Site Blocking and in Situ X-ray Absorption Spectroscopy. ACS Catalysis, 2019, 9, 6869-6881.	11.2	40
20	Impact of pH on Aqueous-Phase Phenol Hydrogenation Catalyzed by Carbon-Supported Pt and Rh. ACS Catalysis, 2019, 9, 1120-1128.	11.2	55
21	Structure Sensitivity in Hydrogenation Reactions on Pt/C in Aqueousâ€phase. ChemCatChem, 2019, 11, 575-582.	3.7	47
22	Earthâ€Abundant Tin Sulfideâ€Based Photocathodes for Solar Hydrogen Production. Advanced Science, 2018, 5, 1700362.	11.2	29
23	Carbon-supported Pt during aqueous phenol hydrogenation with and without applied electrical potential: X-ray absorption and theoretical studies of structure and adsorbates. Journal of Catalysis, 2018, 368, 8-19.	6.2	49
24	Electrocatalytic Hydrogenation of Phenol over Platinum and Rhodium: Unexpected Temperature Effects Resolved. ACS Catalysis, 2016, 6, 7466-7470.	11.2	86
25	Doped rhodium sulfide and thiospinels hydrogen evolution and oxidation electrocatalysts in strong acid electrolytes. Journal of Applied Electrochemistry, 2016, 46, 497-503.	2.9	12
26	Photocatalytic hydrogen production from aqueous methanol solution using Pt nanocatalysts supported on mesoporous TiO2 hollow shells. Journal of Sol-Gel Science and Technology, 2016, 77, 39-47.	2.4	6
27	A Rh_xS_y/C Catalyst for the Hydrogen Oxidation and Hydrogen Evolution Reactions in HBr. Journal of the Electrochemical Society, 2015, 162, F455-F462.	2.9	31
28	Particle suspension reactors and materials for solar-driven water splitting. Energy and Environmental Science, 2015, 8, 2825-2850.	30.8	344
29	Levelized cost of energy and sensitivity analysis for the hydrogenâ€“bromine flow battery. Journal of Power Sources, 2015, 288, 187-198.	7.8	49
30	Electrochemically Deposited Sb and In Doped Tin Sulfide (SnS) Photoelectrodes. Journal of Physical Chemistry C, 2015, 119, 6471-6480.	3.1	27
31	Synthesis and Characterization of RhxSy/C Catalysts for HOR/HER in HBr. ECS Transactions, 2014, 58, 37-43.	0.5	3
32	Stable electrocatalysts for autonomous photoelectrolysis of hydrobromic acid using single-junction solar cells. Energy and Environmental Science, 2014, 7, 978-981.	30.8	17
33	On the Plasmonic Photovoltaic. ACS Nano, 2014, 8, 6066-6073.	14.6	152
34	Investigation of the Electrocatalytic Activity of Rhodium Sulfide for Hydrogen Evolution and Hydrogen Oxidation. Electrochimica Acta, 2014, 145, 224-230.	5.2	25
35	Investigation of the Active Sites of Rhodium Sulfide for Hydrogen Evolution/Oxidation Using Carbon Monoxide as a Probe. Langmuir, 2014, 30, 5662-5668.	3.5	7
36	An autonomous photosynthetic device in which all charge carriers derive from surface plasmons. Nature Nanotechnology, 2013, 8, 247-251.	31.5	1,050

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37	Stabilizing inorganic photoelectrodes for efficient solar-to-chemical energy conversion. Energy and Environmental Science, 2013, 6, 1633.	30.8	32
38	Transition Metal Sulfide Hydrogen Evolution Catalysts for Hydrobromic Acid Electrolysis. Langmuir, 2013, 29, 480-492.	3.5	81
39	Synthesis of Chemicals Using Solar Energy with Stable Photoelectrochemically Active Heterostructures. Nano Letters, 2013, 13, 2110-2115.	9.1	25
40	Gas-Phase Chemistry to Understand Electrochemical Hydrogen Evolution and Oxidation on Doped Transition Metal Sulfides. Journal of the Electrochemical Society, 2013, 160, A1902-A1906.	2.9	5
41	Optimal experimental conditions for hydrogen production using low voltage electrooxidation of organic wastewater feedstock. International Journal of Hydrogen Energy, 2012, 37, 13304-13313.	7.1	14