Nirala Singh

List of Publications by Year
in descending order

41	3,327	236925 25	254184 43
papers	citations	h-index	g-index

43	43	43	4844
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An autonomous photosynthetic device in which all charge carriers derive from surface plasmons. Nature Nanotechnology, 2013, 8, 247-251.	31.5	1,050
2	Activity and Selectivity Trends in Electrocatalytic Nitrate Reduction on Transition Metals. ACS Catalysis, 2019, 9, 7052-7064.	11.2	369
3	Particle suspension reactors and materials for solar-driven water splitting. Energy and Environmental Science, 2015, 8, 2825-2850.	30.8	344
4	Electrocatalytic Hydrogenation of Biomass-Derived Organics: A Review. Chemical Reviews, 2020, 120, 11370-11419.	47.7	185
5	On the Plasmonic Photovoltaic. ACS Nano, 2014, 8, 6066-6073.	14.6	152
6	Recent discoveries in the reaction mechanism of heterogeneous electrocatalytic nitrate reduction. Catalysis Science and Technology, 2021, 11, 705-725.	4.1	114
7	Increasing electrocatalytic nitrate reduction activity by controlling adsorption through PtRu alloying. Journal of Catalysis, 2021, 395, 143-154.	6.2	94
8	Role of Electrocatalysis in the Remediation of Water Pollutants. ACS Catalysis, 2020, 10, 3365-3371.	11.2	88
9	Electrocatalytic Hydrogenation of Phenol over Platinum and Rhodium: Unexpected Temperature Effects Resolved. ACS Catalysis, 2016, 6, 7466-7470.	11.2	86
10	Transition Metal Sulfide Hydrogen Evolution Catalysts for Hydrobromic Acid Electrolysis. Langmuir, 2013, 29, 480-492.	3.5	81
11	Aqueous phase catalytic and electrocatalytic hydrogenation of phenol and benzaldehyde over platinum group metals. Journal of Catalysis, 2020, 382, 372-384.	6.2	68
12	Impact of pH on Aqueous-Phase Phenol Hydrogenation Catalyzed by Carbon-Supported Pt and Rh. ACS Catalysis, 2019, 9, 1120-1128.	11.2	55
13	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
14	Levelized cost of energy and sensitivity analysis for the hydrogenâ€“bromine flow battery. Journal of Power Sources, 2015, 288, 187-198.	7.8	49
15	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
16	Structure Sensitivity in Hydrogenation Reactions on Pt/C in Aqueousâ€phase. ChemCatChem, 2019, 11, 575-582.	3.7	47
17	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
18	Adsorption Energies of Oxygenated Aromatics and Organics on Rhodium and Platinum in Aqueous Phase. ACS Catalysis, 2020, 10, 4929-4941.	11.2	37

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19	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
20	Stabilizing inorganic photoelectrodes for efficient solar-to-chemical energy conversion. Energy and Environmental Science, 2013, 6, 1633.	30.8	32
21	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
22	Earthâ€Abundant Tin Sulfideâ€Based Photocathodes for Solar Hydrogen Production. Advanced Science, 2018, 5, 1700362.	11.2	29
23	Electrochemically Deposited Sb and In Doped Tin Sulfide (SnS) Photoelectrodes. Journal of Physical Chemistry C, 2015, 119, 6471-6480.	3.1	27
24	Synthesis of Chemicals Using Solar Energy with Stable Photoelectrochemically Active Heterostructures. Nano Letters, 2013, 13, 2110-2115.	9.1	25
25	Investigation of the Electrocatalytic Activity of Rhodium Sulfide for Hydrogen Evolution and Hydrogen Oxidation. Electrochimica Acta, 2014, 145, 224-230.	5.2	25
26	Comparing electrocatalytic and thermocatalytic conversion of nitrate on platinumâ€“ruthenium alloys. Catalysis Science and Technology, 2021, 11, 7098-7109.	4.1	18
27	Stable electrocatalysts for autonomous photoelectrolysis of hydrobromic acid using single-junction solar cells. Energy and Environmental Science, 2014, 7, 978-981.	30.8	17
28	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
29	Structures and Free Energies of Cerium Ions in Acidic Electrolytes. Inorganic Chemistry, 2020, 59, 12552-12563.	4.0	14
30	Effects of Solvents on Adsorption Energies: A General Bond-Additivity Model. Journal of Physical Chemistry C, 2021, 125, 24371-24380.	3.1	14
31	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
32	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
33	The Effect of Anion Bridging on Heterogeneous Charge Transfer for V2+/V3+. Cell Reports Physical Science, 2021, 2, 100307.	5.6	9
34	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
35	Explaining the structure sensitivity of Pt and Rh for aqueous-phase hydrogenation of phenol. Journal of Chemical Physics, 2022, 156, 104703.	3.0	7
36	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

#	Article	IF	Citations
37	Temperature dependence of aqueous-phase phenol adsorption on Pt and Rh. Journal of Applied Electrochemistry, 2021, 51, 37-50.	2.9	6
38	Why halides enhance heterogeneous metal ion charge transfer reactions. Chemical Science, 2021, 12, 12704-12710.	7.4	6
39	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
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	Synthesis and Characterization of RhxSy/C Catalysts for HOR/HER in HBr. ECS Transactions, 2014, 58, 37-43.	0.5	3