Arun Murthy

List of Publications by Year
in descending order

39 papers	1,507 citations	430874 18 h-index	345221 36 g-index
40 all docs	40 docs citations	40 times ranked	1903 citing authors

#	Article	IF	Citations
1	Fundamental aspects and recent advances in transition metal nitrides as electrocatalysts for hydrogen evolution reaction: A review. Current Opinion in Solid State and Materials Science, 2020, 24, 100805.	11.5	262
2	Recent advances in hydrogen evolution reaction catalysts on carbon/carbon-based supports in acid media. Journal of Power Sources, 2018, 398, 9-26.	7.8	163
3	Recent development on carbon based heterostructures for their applications in energy and environment: A review. Journal of Industrial and Engineering Chemistry, 2018, 64, 16-59.	5.8	146
4	Insights on Tafel Constant in the Analysis of Hydrogen Evolution Reaction. Journal of Physical Chemistry C, 2018, 122, 23943-23949.	3.1	136
5	Recent progress on synthetic strategies and applications of transition metal phosphides in energy storage and conversion. Ceramics International, 2021, 47, 4404-4425.	4.8	131
6	Highly active MoS₂/carbon electrocatalysts for the hydrogen evolution reaction â€“ insight into the effect of the internal resistance and roughness factor on the Tafel slope. Physical Chemistry Chemical Physics, 2017, 19, 1988-1998.	2.8	108
7	Effect of Mo addition on the electrocatalytic activity of Ptâ€“Snâ€“Mo/C for direct ethanol fuel cells. Electrochimica Acta, 2011, 56, 1611-1618.	5.2	57
8	Application of Derivative Voltammetry in the Analysis of Methanol Oxidation Reaction. Journal of Physical Chemistry C, 2012, 116, 3827-3832.	3.1	55
9	Robust bifunctional catalytic activities of N-doped carbon aerogel-nickel composites for electrocatalytic hydrogen evolution and hydrogenation of nitrocompounds. International Journal of Hydrogen Energy, 2019, 44, 13334-13344.	7.1	45
10	Single-Step Electrodeposited Molybdenum Incorporated Nickel Sulfide Thin Films from Low-Cost Precursors as Highly Efficient Hydrogen Evolution Electrocatalysts in Acid Medium. Journal of Physical Chemistry C, 2017, 121, 11108-11116.	3.1	42
11	Metal-doped molybdenum nitride films for enhanced hydrogen evolution in near-neutral strongly buffered aerobic media. Electrochimica Acta, 2018, 283, 1525-1533.	5.2	39
12	Carbon supported nickel phosphide as efficient electrocatalyst for hydrogen and oxygen evolution reactions. International Journal of Hydrogen Energy, 2021, 46, 622-632.	7.1	39
13	Comparison of the stabilities and activities of Ptâ€“Ru/C and Pt3â€“Sn/C electrocatalysts synthesized by the polyol method for methanol electro-oxidation reaction. Journal of Electroanalytical Chemistry, 2011, 659, 168-175.	3.8	26
14	Electrodeposited carbon-supported nickel sulfide thin films with enhanced stability in acid medium as hydrogen evolution reaction electrocatalyst. Journal of Solid State Electrochemistry, 2018, 22, 365-374.	2.5	26
15	Carbon-supported Pt nanoparticles prepared by a modified borohydride reduction method: Effect on the particle morphology and catalytic activity for COad and methanol electro-oxidation. Electrochemistry Communications, 2011, 13, 480-483.	4.7	21
16	Electrooxidation of methanol on highly active and stable Ptâ€“Snâ€“Ce/C catalyst for direct methanol fuel cells. Applied Catalysis B: Environmental, 2012, 121-122, 154-161.	20.2	20
17	Enhancement of hydrogen evolution activities of low-cost transition metal electrocatalysts in near-neutral strongly buffered aerobic media. Electrochemistry Communications, 2017, 83, 6-10.	4.7	20
18	Analysis of the diffusion layer thickness, equivalent circuit and conductance behaviour for reversible electron transfer processes in linear sweep voltammetry. Electrochimica Acta, 2004, 49, 445-453.	5.2	19

#	Article	IF	Citations
19	Highly water-dispersible, mixed ionicâ€“electronic conducting, polymer acid-doped polyanilines as ionomers for direct methanol fuel cells. Chemical Communications, 2011, 47, 6882.	4.1	18
20	Highly Water Dispersible Polymer Acid-Doped Polyanilines as Low-Cost, Nafion-Free Ionomers for Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2018, 1, 1512-1521.	5.1	18
21	Application of derivative voltammetry in the quantitative determination of alloxan at single-walled carbon nanotubes modified electrode. Electrochimica Acta, 2019, 317, 182-190.	5.2	15
22	Formulation of a simple analytical expression for irreversible electron transfer processes in linear sweep voltammetry and its experimental verification. Electrochimica Acta, 2004, 49, 2569-2579.	5.2	13
23	Direct kinetic evidence for the electronic effect of ruthenium in PtRu on the dissociative adsorption of methanol. Electrochemistry Communications, 2011, 13, 310-313.	4.7	12
24	Solvent effect on the electrochemical reductive cleavage of carbon tetrachloride â€“ a novel example of the deviation from the quadratic activation-driving force relationship. Chemical Physics Letters, 2004, 390, 261-267.	2.6	11
25	A DMFC stack operating with hydrocarbon blend membranes and Ptâ€“Ruâ€“Snâ€“Ce/C and Pdâ€“Co/C electrocatalysts. International Journal of Hydrogen Energy, 2013, 38, 7448-7457.	7.1	11
26	Electrochemical reductive cleavage of carbonâ€“chlorine bond in 1-chloro-2,4-dinitrobenzene. Electrochimica Acta, 2005, 51, 242-246.	5.2	10
27	Estimation of the Gibbs free energy of transfer of electrolytes from aqueous to organic solvents â€“ a novel application of the quadratic activationâ€“driving force relationship. Chemical Physics Letters, 2003, 382, 325-331.	2.6	8
28	Cleavage of an aromatic carbonâ€“heteroatom bond in a single step or successive steps?â€“â€“A mechanistic distinction in the reduction of 5-bromo-1,3-dichloro-2-iodobenzene. Tetrahedron Letters, 2004, 45, 4741-4744.	1.4	8
29	Evidence for the formation of radical anion in the reductive cleavage of carbonâ€“bromine bond in 4â€²-bromomethylbiphenyl-2-carbonitrile. Chemical Physics Letters, 2005, 414, 55-60.	2.6	7
30	Current function for irreversible electron transfer processes in linear sweep voltammetry for the reactions obeying Marcus kinetics. Chemical Physics Letters, 2004, 387, 317-321.	2.6	5
31	Linear kinetic and free energy correlations for intra molecular dissociative electron transfers â€“ Estimation of standard potentials and cleavage rate constants of radical anions of aromatic halides. Chemical Physics Letters, 2006, 421, 193-197.	2.6	5
32	Electrocatalytic oxidation of methanol to soluble products on polycrystalline platinum: Application of convolution potential sweep voltammetry in the estimation of kinetic parameters. Electrochimica Acta, 2011, 56, 6078-6083.	5.2	5
33	Electrochemical reductive cleavage of carbonâ€“halogen bonds in 5-bromo-1,3-dichloro-2-iodobenzene. Tetrahedron, 2004, 60, 10967-10972.	1.9	3
34	Distinction between stepwise and concerted mechanisms in reductive cleavage reactionsâ€”use of voltammetric current function in the analysis of non-linear kinetic laws. Tetrahedron, 2005, 61, 1785-1791.	1.9	1
35	Hammett-type relationship for the cleavage of radical anions of aromatic chlorides and bromides. Tetrahedron, 2005, 61, 3755-3758.	1.9	1
36	4-Bromo-2,6-dichloroaniline. Acta Crystallographica Section E: Structure Reports Online, 2005, 61, o758-o759.	0.2	1

#	Article	IF	Citations
37	5-Bromo-1,3-dichloro-2-iodobenzene. Acta Crystallographica Section E: Structure Reports Online, 2004, 60, o1933-o1934.	0.2	0
38	Reversible Quantum Confinement of Polarons by Reaction of Protonated Emeraldine with Nitric Oxide. Journal of Physical Chemistry B, 2009, 113, 10555-10558.	2.6	0
39	Novel synthesis methods of nanostructured oxide-free materials for energy storage and conversion applications. , 2022, , 25-49.		0