Kannimuthu Karthick

List of Publications by Year
in descending order

64 papers	5,521 citations	186265 28 h-index	118850 62 g-index
66 all docs	66 docs citations	66 times ranked	5691 citing authors

#	Article	IF	Citations
1	Recent Trends and Perspectives in Electrochemical Water Splitting with an Emphasis on Sulfide, Selenide, and Phosphide Catalysts of Fe, Co, and Ni: A Review. ACS Catalysis, 2016, 6, 8069-8097.	11.2	1,936
2	Precision and correctness in the evaluation of electrocatalytic water splitting: revisiting activity parameters with a critical assessment. Energy and Environmental Science, 2018, 11, 744-771.	30.8	1,055
3	Evolution of layered double hydroxides (LDH) as high performance water oxidation electrocatalysts: A review with insights on structure, activity and mechanism. Materials Today Energy, 2017, 6, 1-26.	4.7	301
4	Enhancing electrocatalytic total water splitting at few layer Pt-NiFe layered double hydroxide interfaces. Nano Energy, 2017, 39, 30-43.	16.0	236
5	A vast exploration of improvising synthetic strategies for enhancing the OER kinetics of LDH structures: a review. Journal of Materials Chemistry A, 2021, 9, 1314-1352.	10.3	206
6	Investigation on nanostructured Cu-based electrocatalysts for improvising water splitting: a review. Inorganic Chemistry Frontiers, 2021, 8, 234-272.	6.0	103
7	Self-Assembled Molecular Hybrids of CoS-DNA for Enhanced Water Oxidation with Low Cobalt Content. Inorganic Chemistry, 2017, 56, 6734-6745.	4.0	93
8	Enabling and Inducing Oxygen Vacancies in Cobalt Iron Layer Double Hydroxide via Selenization as Precatalysts for Electrocatalytic Hydrogen and Oxygen Evolution Reactions. Inorganic Chemistry, 2021, 60, 2023-2036.	4.0	91
9	NiTe₂ Nanowire Outperforms Pt/C in High-Rate Hydrogen Evolution at Extreme pH Conditions. Inorganic Chemistry, 2018, 57, 3082-3096.	4.0	83
10	Nanosheets of Nickel Iron Hydroxy Carbonate Hydrate with Pronounced OER Activity under Alkaline and Near-Neutral Conditions. Inorganic Chemistry, 2019, 58, 1895-1904.	4.0	68
11	Oxygen vacancy enriched NiMoO₄ nanorods <i>via</i> microwave heating: a promising highly stable electrocatalyst for total water splitting. Journal of Materials Chemistry A, 2021, 9, 11691-11704.	10.3	65
12	Magnetic CoPt nanoparticle-decorated ultrathin Co(OH)₂ nanosheets: an efficient bi-functional water splitting catalyst. Catalysis Science and Technology, 2017, 7, 2486-2497.	4.1	61
13	Stabilization of ruthenium nanoparticles over NiV-LDH surface for enhanced electrochemical water splitting: an oxygen vacancy approach. Journal of Materials Chemistry A, 2022, 10, 3618-3632.	10.3	61
14	Spinel Cobalt Titanium Binary Oxide as an All-Non-Precious Water Oxidation Electrocatalyst in Acid. Inorganic Chemistry, 2019, 58, 8570-8576.	4.0	55
15	Mixed-â€‹ligand-devised anionic MOF with divergent open Co(II)-nodes as chemo-resistant, bi-functional material for electrochemical water oxidation and mild-condition tandem CO2 fixation. Chemical Engineering Journal, 2022, 429, 132301.	12.7	51
16	Current perspectives on 3D ZIFs incorporated with 1D carbon matrices as fibers <i>via</i> electrospinning processes towards electrocatalytic water splitting: a review. Journal of Materials Chemistry A, 2021, 9, 11961-12002.	10.3	50
17	Transition-Metal-Based Zeolite Imidazolate Framework Nanofibers via an Electrospinning Approach: A Review. ACS Omega, 2020, 5, 57-67.	3.5	45
18	Current progressions in transition metal based hydroxides as bi-functional catalysts towards electrocatalytic total water splitting. Sustainable Energy and Fuels, 2021, 5, 6215-6268.	4.9	44

#	Article	IF	Citations
19	Electrospun cobalt-ZIF micro-fibers for efficient water oxidation under unique pH conditions. Catalysis Science and Technology, 2019, 9, 1847-1856.	4.1	43
20	Shrinking the Hydrogen Overpotential of Cu by 1 V and Imparting Ultralow Charge Transfer Resistance for Enhanced H₂ Evolution. ACS Catalysis, 2018, 8, 5686-5697.	11.2	42
21	Electrospun Cobalt-Incorporated MOF-5 Microfibers as a Promising Electrocatalyst for OER in Alkaline Media. Inorganic Chemistry, 2021, 60, 9899-9911.	4.0	41
22	Recent Progresses in Engineering of Ni and Co based Phosphides for Effective Electrocatalytic Water Splitting. ChemElectroChem, 2021, 8, 4638-4685.	3.4	39
23	A highly stable rhenium organosol on a DNA scaffold for catalytic and SERS applications. Journal of Materials Chemistry C, 2016, 4, 6309-6320.	5.5	35
24	Polymeric Nanofibers Containing CoNi-Based Zeolitic Imidazolate Framework Nanoparticles for Electrocatalytic Water Oxidation. ACS Applied Nano Materials, 2020, 3, 4274-4282.	5.0	35
25	In Situ Modified Nitrogen-Enriched ZIF-67 Incorporated ZIF-7 Nanofiber: An Unusual Electrocatalyst for Water Oxidation. Inorganic Chemistry, 2019, 58, 13826-13835.	4.0	33
26	Electrochemically chopped WS₂ quantum dots as an efficient and stable electrocatalyst for water reduction. Catalysis Science and Technology, 2019, 9, 223-231.	4.1	32
27	DNA Aided Formation of Aggregated Nb₂O₅ Nanoassemblies as Anode Material for Dye Sensitized Solar Cell (DSSC) and Supercapacitor Applications. ACS Sustainable Chemistry and Engineering, 2016, 4, 3174-3188.	6.7	31
28	Annexation of Nickel Vanadate (Ni₃V₂O₈) Nanocubes on Nanofibers: An Excellent Electrocatalyst for Water Oxidation. ACS Sustainable Chemistry and Engineering, 2020, 8, 4572-4579.	6.7	30
29	Advanced Cu₃Sn and Selenized Cu₃Sn@Cu Foam as Electrocatalysts for Water Oxidation under Alkaline and Near-Neutral Conditions. Inorganic Chemistry, 2019, 58, 9490-9499.	4.0	29
30	Electrocatalytic Oxygen Evolution in Acidic and Alkaline Media by a Multistimuli-Responsive Cobalt(II) Organogel. ACS Sustainable Chemistry and Engineering, 2019, 7, 16094-16102.	6.7	27
31	Cobalt tungsten oxide hydroxide hydrate (CTOHH) on DNA scaffold: an excellent bi-functional catalyst for oxygen evolution reaction (OER) and aromatic alcohol oxidation. Dalton Transactions, 2019, 48, 17117-17131.	3.3	25
32	Cubic Nanostructures of Nickelâ€“Cobalt Carbonate Hydroxide Hydrate as a High-Performance Oxygen Evolution Reaction Electrocatalyst in Alkaline and Near-Neutral Media. Inorganic Chemistry, 2020, 59, 16690-16702.	4.0	24
33	Enhancing Hydrogen Evolution Reaction Activities of 2H-Phase VS₂ Layers with Palladium Nanoparticles. Inorganic Chemistry, 2020, 59, 10197-10207.	4.0	24
34	Developments in DNA metallization strategies for water splitting electrocatalysis: A review. Advances in Colloid and Interface Science, 2020, 282, 102205.	14.7	23
35	Green and sustainable route for oxidative depolymerization of lignin: New platform for fine chemicals and fuels. Biotechnology Progress, 2021, 37, e3111.	2.6	22
36	Pt nanoparticle tethered DNA assemblies for enhanced catalysis and SERS applications. New Journal of Chemistry, 2018, 42, 15784-15792.	2.8	21

#	Article	IF	Citations
37	Evaluating DNA Derived and Hydrothermally Aided Cobalt Selenide Catalysts for Electrocatalytic Water Oxidation. Inorganic Chemistry, 2019, 58, 6877-6884.	4.0	21
38	V3+ Incorporated Î²-Co(OH)2: A Robust and Efficient Electrocatalyst for Water Oxidation. Inorganic Chemistry, 2020, 59, 730-740.	4.0	20
39	Tuning Cu Overvoltage for a Copperâ€"Telluride System in Electrocatalytic Water Reduction and Feasible Feedstock Conversion: A New Approach. Inorganic Chemistry, 2020, 59, 11129-11141.	4.0	20
40	Enhancement of HER kinetics with RhNiFe for high-rate water electrolysis. Catalysis Science and Technology, 2020, 10, 3681-3693.	4.1	20
41	Detection of Lignin Motifs with RuO₂-DNA as an Active Catalyst via Surface-Enhanced Raman Scattering Studies. ACS Sustainable Chemistry and Engineering, 2019, 7, 18463-18475.	6.7	18
42	Synthesis of ultra-small Rh nanoparticles congregated over DNA for catalysis and SERS applications. Colloids and Surfaces B: Biointerfaces, 2019, 173, 249-257.	5.0	18
43	Surface Decoration of DNA-Aided Amorphous Cobalt Hydroxide <i>via</i> Ag⁺ Ions as Binder-Free Electrodes toward Electrochemical Oxygen Evolution Reaction. Inorganic Chemistry, 2021, 60, 2680-2693.	4.0	18
44	Metallic Gold-Incorporated Ni(OH)₂ for Enhanced Water Oxidation in an Alkaline Medium: A Simple Wet-Chemical Approach. Inorganic Chemistry, 2021, 60, 15818-15829.	4.0	18
45	Low-temperature synthesis of SrTiO₃ nanoassemblies on DNA scaffolds and their applications in dye-sensitized solar cells and supercapacitors. New Journal of Chemistry, 2017, 41, 3473-3486.	2.8	17
46	Advancing the extended roles of 3D transition metal based heterostructures with copious active sites for electrocatalytic water splitting. Dalton Transactions, 2021, 50, 13176-13200.	3.3	17
47	Regulating the heteroatom doping in metallogel-derived Co@dual self-doped carbon onions to maximize electrocatalytic water splitting. Journal of Materials Chemistry A, 2021, 9, 26800-26809.	10.3	17
48	Enhancement of the OER Kinetics of the Less-Explored Î±-MnO₂ <i>via</i> Nickel Doping Approaches in Alkaline Medium. Inorganic Chemistry, 2021, 60, 19429-19439.	4.0	17
49	BrÃ¸nsted Acid-Functionalized Ionic Co(II) Framework: A Tailored Vessel for Electrocatalytic Oxygen Evolution and Size-Exclusive Optical Speciation of Biothiols. ACS Applied Materials & Interfaces, 2022, 14, 29773-29787.	8.0	17
50	Nickelo-Sulfurization of DNA Leads to an Efficient Alkaline Water Oxidation Electrocatalyst with Low Ni Quantity. ACS Sustainable Chemistry and Engineering, 2018, 6, 6802-6810.	6.7	16
51	Shape-selective rhodium nano-huddles on DNA for high efficiency hydrogen evolution reaction in acidic medium. Journal of Materials Chemistry C, 2021, 9, 1709-1720.	5.5	15
52	In Situ Decorated Ni Metallic Layer with CoS₂-Layered Thin Films via a Layer-by-Layer Strategy Using Pulsed Laser Deposition for Enhanced Electrocatalytic OER. Inorganic Chemistry, 2021, 60, 8946-8957.	4.0	14
53	Aiding Time-Dependent Laser Ablation to Direct 1T-MoS₂ for an Improved Hydrogen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2021, 9, 14744-14755.	6.7	12
54	Prompt synthesis of iridium organosol on DNA for catalysis and SERS applications. Journal of Materials Chemistry C, 2017, 5, 11947-11957.	5.5	11

#	Article	IF	Citations
55	Employing DNA scaffold with rhenium electrocatalyst for enhanced HER activities. Applied Surface Science, 2020, 528, 147049.	6.1	11
56	Temperature-Controlled Structural Variations of Meticulous Fibrous Networks of NiFe-Polymeric Zeolite Imidazolate Frameworks for Enhanced Performance in Electrocatalytic Water-Splitting Reactions. Inorganic Chemistry, 2021, 60, 12467-12480.	4.0	10
57	Self-assembling of metallic Rh over DNA as nano-chains: An effective organosol for catalysis and SERS studies. Applied Surface Science, 2020, 527, 146777.	6.1	10
58	DNA-Modified Cobalt Tungsten Oxide Hydroxide Hydrate Nanochains as an Effective Electrocatalyst with Amplified CO Tolerance during Methanol Oxidation. ACS Omega, 2021, 6, 19162-19169.	3.5	6
59	Provoking electrocatalytic activity with bio-molecules at inactive gas diffusion layers. Materials Today Energy, 2019, 12, 318-326.	4.7	5
60	Prospects in interfaces of biomolecule DNA and nanomaterials as an effective way for improvising surface enhanced Raman scattering: A review. Advances in Colloid and Interface Science, 2021, 291, 102399.	14.7	5
61	Fabrication of highly stable platinum organosols over DNA-scaffolds for enriched catalytic and SERS applications. Dalton Transactions, 2021, 50, 7198-7211.	3.3	4
62	Tuning the Electronic Structure of a Ni-Vacancy-Enriched AuNi Spherical Nanoalloy via Electrochemical Etching for Water Oxidation Studies in Alkaline and Neutral Media. Inorganic Chemistry, 2022, 61, 8570-8584.	4.0	4
63	Transition metalâ€“based nitrides for energy applications. , 2020, , 493-515.		0
64	Role of hydrogen generation technologies for renewable hydrogen production. , 2022, , 377-407.		0