

# Kannimuthu Karthick

## List of Publications by Year in descending order

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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	Mixed-ligand-devised anionic MOF with divergent open Co(II)-nodes as chemo-resistant, bi-functional material for electrochemical water oxidation and mild-condition tandem CO <sub>2</sub> fixation. <i>Chemical Engineering Journal</i> , 2022, 429, 132301.	12.7	51
2	Stabilization of ruthenium nanoparticles over NiV-LDH surface for enhanced electrochemical water splitting: an oxygen vacancy approach. <i>Journal of Materials Chemistry A</i> , 2022, 10, 3618-3632.	10.3	61
3	Tuning the Electronic Structure of a Ni-Vacancy-Enriched AuNi Spherical Nanoalloy via Electrochemical Etching for Water Oxidation Studies in Alkaline and Neutral Media. <i>Inorganic Chemistry</i> , 2022, 61, 8570-8584.	4.0	4
4	Role of hydrogen generation technologies for renewable hydrogen production. , 2022, , 377-407.		0
5	Brønsted Acid-Functionalized Ionic Co(II) Framework: A Tailored Vessel for Electrocatalytic Oxygen Evolution and Size-Exclusive Optical Speciation of Biothiols. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 29773-29787.	8.0	17
6	A vast exploration of improvising synthetic strategies for enhancing the OER kinetics of LDH structures: a review. <i>Journal of Materials Chemistry A</i> , 2021, 9, 1314-1352.	10.3	206
7	Green and sustainable route for oxidative depolymerization of lignin: New platform for fine chemicals and fuels. <i>Biotechnology Progress</i> , 2021, 37, e3111.	2.6	22
8	Shape-selective rhodium nano-huddles on DNA for high efficiency hydrogen evolution reaction in acidic medium. <i>Journal of Materials Chemistry C</i> , 2021, 9, 1709-1720.	5.5	15
9	Investigation on nanostructured Cu-based electrocatalysts for improvising water splitting: a review. <i>Inorganic Chemistry Frontiers</i> , 2021, 8, 234-272.	6.0	103
10	Surface Decoration of DNA-Aided Amorphous Cobalt Hydroxide <i>via</i> Ag <sup>+</sup> Ions as Binder-Free Electrodes toward Electrochemical Oxygen Evolution Reaction. <i>Inorganic Chemistry</i> , 2021, 60, 2680-2693.	4.0	18
11	Prospects in interfaces of biomolecule DNA and nanomaterials as an effective way for improvising surface enhanced Raman scattering: A review. <i>Advances in Colloid and Interface Science</i> , 2021, 291, 102399.	14.7	5
12	Electrospun Cobalt-Incorporated MOF-5 Microfibers as a Promising Electrocatalyst for OER in Alkaline Media. <i>Inorganic Chemistry</i> , 2021, 60, 9899-9911.	4.0	41
13	In Situ Decorated Ni Metallic Layer with CoS <sub>2</sub> -Layered Thin Films via a Layer-by-Layer Strategy Using Pulsed Laser Deposition for Enhanced Electrocatalytic OER. <i>Inorganic Chemistry</i> , 2021, 60, 8946-8957.	4.0	14
14	Temperature-Controlled Structural Variations of Meticulous Fibrous Networks of NiFe-Polymeric Zeolite Imidazolate Frameworks for Enhanced Performance in Electrocatalytic Water-Splitting Reactions. <i>Inorganic Chemistry</i> , 2021, 60, 12467-12480.	4.0	10
15	DNA-Modified Cobalt Tungsten Oxide Hydroxide Hydrate Nanochains as an Effective Electrocatalyst with Amplified CO Tolerance during Methanol Oxidation. <i>ACS Omega</i> , 2021, 6, 19162-19169.	3.5	6
16	Recent Progresses in Engineering of Ni and Co based Phosphides for Effective Electrocatalytic Water Splitting. <i>ChemElectroChem</i> , 2021, 8, 4638-4685.	3.4	39
17	Oxygen vacancy enriched NiMoO <sub>4</sub> nanorods <i>via</i> microwave heating: a promising highly stable electrocatalyst for total water splitting. <i>Journal of Materials Chemistry A</i> , 2021, 9, 11691-11704.	10.3	65
18	Advancing the extended roles of 3D transition metal based heterostructures with copious active sites for electrocatalytic water splitting. <i>Dalton Transactions</i> , 2021, 50, 13176-13200.	3.3	17

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19	Fabrication of highly stable platinum organosols over DNA-scaffolds for enriched catalytic and SERS applications. Dalton Transactions, 2021, 50, 7198-7211.	3.3	4
20	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
21	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
22	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
23	Aiding Time-Dependent Laser Ablation to Direct 1T-MoS <sub>2</sub> for an Improved Hydrogen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2021, 9, 14744-14755.	6.7	12
24	Metallic Gold-Incorporated Ni(OH) <sub>2</sub> for Enhanced Water Oxidation in an Alkaline Medium: A Simple Wet-Chemical Approach. Inorganic Chemistry, 2021, 60, 15818-15829.	4.0	18
25	Regulating the heteroatom doping in metallogel-derived Co@self-doped carbon onions to maximize electrocatalytic water splitting. Journal of Materials Chemistry A, 2021, 9, 26800-26809.	10.3	17
26	Enhancement of the OER Kinetics of the Less-Explored $\delta$ -MnO <sub>2</sub> <i>via</i> Nickel Doping Approaches in Alkaline Medium. Inorganic Chemistry, 2021, 60, 19429-19439.	4.0	17
27	Transition-Metal-Based Zeolite Imidazolate Framework Nanofibers via an Electrospinning Approach: A Review. ACS Omega, 2020, 5, 57-67.	3.5	45
28	V <sup>3+</sup> Incorporated $\delta$ -Co(OH) <sub>2</sub> : A Robust and Efficient Electrocatalyst for Water Oxidation. Inorganic Chemistry, 2020, 59, 730-740.	4.0	20
29	Tuning Cu Overvoltage for a Copper-Telluride System in Electrocatalytic Water Reduction and Feasible Feedstock Conversion: A New Approach. Inorganic Chemistry, 2020, 59, 11129-11141.	4.0	20
30	Cubic Nanostructures of Nickel-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
31	Transition metal-based nitrides for energy applications. , 2020, , 493-515.		0
32	Polymeric Nanofibers Containing CoNi-Based Zeolitic Imidazolate Framework Nanoparticles for Electrocatalytic Water Oxidation. ACS Applied Nano Materials, 2020, 3, 4274-4282.	5.0	35
33	Employing DNA scaffold with rhenium electrocatalyst for enhanced HER activities. Applied Surface Science, 2020, 528, 147049.	6.1	11
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	Enhancing Hydrogen Evolution Reaction Activities of 2H-Phase VS <sub>2</sub> Layers with Palladium Nanoparticles. Inorganic Chemistry, 2020, 59, 10197-10207.	4.0	24
36	Annexation of Nickel Vanadate (Ni <sub>3</sub> V <sub>2</sub> O <sub>8</sub> ) Nanocubes on Nanofibers: An Excellent Electrocatalyst for Water Oxidation. ACS Sustainable Chemistry and Engineering, 2020, 8, 4572-4579.	6.7	30

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37	Enhancement of HER kinetics with RhNiFe for high-rate water electrolysis. <i>Catalysis Science and Technology</i> , 2020, 10, 3681-3693.	4.1	20
38	Self-assembling of metallic Rh over DNA as nano-chains: An effective organosol for catalysis and SERS studies. <i>Applied Surface Science</i> , 2020, 527, 146777.	6.1	10
39	Detection of Lignin Motifs with RuO <sub>2</sub> -DNA as an Active Catalyst via Surface-Enhanced Raman Scattering Studies. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 18463-18475.	6.7	18
40	In Situ Modified Nitrogen-Enriched ZIF-67 Incorporated ZIF-7 Nanofiber: An Unusual Electrocatalyst for Water Oxidation. <i>Inorganic Chemistry</i> , 2019, 58, 13826-13835.	4.0	33
41	Electrocatalytic Oxygen Evolution in Acidic and Alkaline Media by a Multistimuli-Responsive Cobalt(II) Organogel. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 16094-16102.	6.7	27
42	Electrochemically chopped WS <sub>2</sub> quantum dots as an efficient and stable electrocatalyst for water reduction. <i>Catalysis Science and Technology</i> , 2019, 9, 223-231.	4.1	32
43	Advanced Cu <sub>3</sub> Sn and Selenized Cu <sub>3</sub> Sn@Cu Foam as Electrocatalysts for Water Oxidation under Alkaline and Near-Neutral Conditions. <i>Inorganic Chemistry</i> , 2019, 58, 9490-9499.	4.0	29
44	Spinel Cobalt Titanium Binary Oxide as an All-Non-Precious Water Oxidation Electrocatalyst in Acid. <i>Inorganic Chemistry</i> , 2019, 58, 8570-8576.	4.0	55
45	Evaluating DNA Derived and Hydrothermally Aided Cobalt Selenide Catalysts for Electrocatalytic Water Oxidation. <i>Inorganic Chemistry</i> , 2019, 58, 6877-6884.	4.0	21
46	Electrospun cobalt-ZIF micro-fibers for efficient water oxidation under unique pH conditions. <i>Catalysis Science and Technology</i> , 2019, 9, 1847-1856.	4.1	43
47	Provoking electrocatalytic activity with bio-molecules at inactive gas diffusion layers. <i>Materials Today Energy</i> , 2019, 12, 318-326.	4.7	5
48	Cobalt tungsten oxide hydroxide hydrate (CTOHH) on DNA scaffold: an excellent bi-functional catalyst for oxygen evolution reaction (OER) and aromatic alcohol oxidation. <i>Dalton Transactions</i> , 2019, 48, 17117-17131.	3.3	25
49	Nanosheets of Nickel Iron Hydroxy Carbonate Hydrate with Pronounced OER Activity under Alkaline and Near-Neutral Conditions. <i>Inorganic Chemistry</i> , 2019, 58, 1895-1904.	4.0	68
50	Synthesis of ultra-small Rh nanoparticles congregated over DNA for catalysis and SERS applications. <i>Colloids and Surfaces B: Biointerfaces</i> , 2019, 173, 249-257.	5.0	18
51	Precision and correctness in the evaluation of electrocatalytic water splitting: revisiting activity parameters with a critical assessment. <i>Energy and Environmental Science</i> , 2018, 11, 744-771.	30.8	1,055
52	NiTe <sub>2</sub> Nanowire Outperforms Pt/C in High-Rate Hydrogen Evolution at Extreme pH Conditions. <i>Inorganic Chemistry</i> , 2018, 57, 3082-3096.	4.0	83
53	Nickelo-Sulfurization of DNA Leads to an Efficient Alkaline Water Oxidation Electrocatalyst with Low Ni Quantity. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 6802-6810.	6.7	16
54	Shrinking the Hydrogen Overpotential of Cu by 1 V and Imparting Ultralow Charge Transfer Resistance for Enhanced H <sub>2</sub> Evolution. <i>ACS Catalysis</i> , 2018, 8, 5686-5697.	11.2	42

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55	Pt nanoparticle tethered DNA assemblies for enhanced catalysis and SERS applications. <i>New Journal of Chemistry</i> , 2018, 42, 15784-15792.	2.8	21
56	Self-Assembled Molecular Hybrids of CoS-DNA for Enhanced Water Oxidation with Low Cobalt Content. <i>Inorganic Chemistry</i> , 2017, 56, 6734-6745.	4.0	93
57	Magnetic CoPt nanoparticle-decorated ultrathin Co(OH) <sub>2</sub> nanosheets: an efficient bi-functional water splitting catalyst. <i>Catalysis Science and Technology</i> , 2017, 7, 2486-2497.	4.1	61
58	Enhancing electrocatalytic total water splitting at few layer Pt-NiFe layered double hydroxide interfaces. <i>Nano Energy</i> , 2017, 39, 30-43.	16.0	236
59	Low-temperature synthesis of SrTiO <sub>3</sub> nanoassemblies on DNA scaffolds and their applications in dye-sensitized solar cells and supercapacitors. <i>New Journal of Chemistry</i> , 2017, 41, 3473-3486.	2.8	17
60	Prompt synthesis of iridium organosol on DNA for catalysis and SERS applications. <i>Journal of Materials Chemistry C</i> , 2017, 5, 11947-11957.	5.5	11
61	Evolution of layered double hydroxides (LDH) as high performance water oxidation electrocatalysts: A review with insights on structure, activity and mechanism. <i>Materials Today Energy</i> , 2017, 6, 1-26.	4.7	301
62	A highly stable rhenium organosol on a DNA scaffold for catalytic and SERS applications. <i>Journal of Materials Chemistry C</i> , 2016, 4, 6309-6320.	5.5	35
63	DNA Aided Formation of Aggregated Nb <sub>2</sub> O <sub>5</sub> Nanoassemblies as Anode Material for Dye Sensitized Solar Cell (DSSC) and Supercapacitor Applications. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 3174-3188.	6.7	31
64	Recent Trends and Perspectives in Electrochemical Water Splitting with an Emphasis on Sulfide, Selenide, and Phosphide Catalysts of Fe, Co, and Ni: A Review. <i>ACS Catalysis</i> , 2016, 6, 8069-8097.	11.2	1,936