

# Muhammad Hilmy Alfaruqi

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

52  
papers

3,661  
citations

25  
h-index

53  
g-index

53  
ext. papers

4,609  
ext. citations

9.6  
avg, IF

5.38  
L-index

#	Paper	IF	Citations
52	Stable Solid Electrolyte Interphase for Long-Life Potassium Metal Batteries. <i>ACS Energy Letters</i> , <b>2022</b> , 7, 401-409	20.1	4
51	Triggering the theoretical capacity of Na <sub>1.1</sub> V <sub>3</sub> O <sub>7.9</sub> nanorod cathode by polypyrrole coating for high-energy zinc-ion batteries. <i>Chemical Engineering Journal</i> , <b>2022</b> , 446, 137069	14.7	4
50	Validating the Structural (In)stability of P3- and P2-NaMgMnO-Layered Cathodes for Sodium-Ion Batteries: A Time-Decisive Approach. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 53877-53891	9.5	1
49	Hyper oxidized V <sub>6</sub> O <sub>13</sub> +xH <sub>2</sub> O layered cathode for aqueous rechargeable Zn battery: Effect on dual carriers transportation and parasitic reactions. <i>Energy Storage Materials</i> , <b>2021</b> , 35, 47-61	19.4	12
48	Recent Developments of Zinc-Ion Batteries <b>2021</b> , 27-57		0
47	Cationic and transition metal co-substitution strategy of O <sub>3</sub> -type NaCrO <sub>2</sub> cathode for high-energy sodium-ion batteries. <i>Energy Storage Materials</i> , <b>2021</b> , 41, 183-195	19.4	11
46	In Situ Oriented Mn Deficient ZnMnO@C Nanoarchitecture for Durable Rechargeable Aqueous Zinc-Ion Batteries. <i>Advanced Science</i> , <b>2021</b> , 8, 2002636	13.6	32
45	Initial investigation and evaluation of potassium metal as an anode for rechargeable potassium batteries. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 16718-16737	13	22
44	Multidimensional Na <sub>4</sub> V <sub>2</sub> Mn <sub>0.9</sub> Cu <sub>0.1</sub> (PO <sub>4</sub> ) <sub>3</sub> /C cotton-candy cathode materials for high energy Na-ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 12055-12068	13	19
43	Manganese and Vanadium Oxide Cathodes for Aqueous Rechargeable Zinc-Ion Batteries: A Focused View on Performance, Mechanism, and Developments. <i>ACS Energy Letters</i> , <b>2020</b> , 5, 2376-2400	20.1	128
42	Density Functional Theory Investigation of Mixed Transition Metals in Olivine and Tavorite Cathode Materials for Li-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 16376-16386	9.5	10
41	Investigation of K-ion storage performances in a bismuth sulfide-carbon nanotube composite anode.. <i>RSC Advances</i> , <b>2020</b> , 10, 6536-6539	3.7	3
40	Quasi-solid-state zinc-ion battery based on $\beta$ -MnO <sub>2</sub> cathode with husk-like morphology. <i>Electrochimica Acta</i> , <b>2020</b> , 345, 136189	6.7	9
39	Na <sub>2.3</sub> Cu <sub>1.1</sub> Mn <sub>2</sub> O <sub>7</sub> nanoflakes as enhanced cathode materials for high-energy sodium-ion batteries achieved by a rapid pyrosynthesis approach. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 770-778 <sup>13</sup>		9
38	Investigation of superior sodium storage and reversible Na <sub>2</sub> S conversion reactions in a porous NiS <sub>2</sub> @C composite using in operando X-ray diffraction. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 24401-24407 <sup>3</sup>		12
37	Tungsten Oxide/Zirconia as a Functional Polysulfide Mediator for High-Performance Lithium Sulfur Batteries. <i>ACS Energy Letters</i> , <b>2020</b> , 5, 3168-3175	20.1	11
36	Facile synthesis of reduced graphene oxide by modified Hummer's method as anode material for Li-, Na- and K-ion secondary batteries. <i>Royal Society Open Science</i> , <b>2019</b> , 6, 181978	3.3	24

35	K <sup>+</sup> intercalated V <sub>2</sub> O <sub>5</sub> nanorods with exposed facets as advanced cathodes for high energy and high rate zinc-ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 20335-20347	13	67
34	One-pot pyro synthesis of a nanosized-LiMnO/C cathode with enhanced lithium storage properties.. <i>RSC Advances</i> , <b>2019</b> , 9, 24030-24038	3.7	6
33	Uniform Carbon Coated Na <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>2</sub> O <sub>2</sub> ·xH <sub>2</sub> O Nanoparticles for Sodium Ion Batteries as Cathode. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2019</b> , 7, 18826-18834	8.3	11
32	A new rechargeable battery based on a zinc anode and a NaVO nanorod cathode. <i>Chemical Communications</i> , <b>2019</b> , 55, 3793-3796	5.8	32
31	First principles calculations study of MnO <sub>2</sub> as a potential cathode for Al-ion battery application. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 26966-26974	13	31
30	Facile synthesis of pyrite (FeS/C) nanoparticles as an electrode material for non-aqueous hybrid electrochemical capacitors. <i>Nanoscale</i> , <b>2018</b> , 10, 5938-5949	7.7	38
29	Structural transformation and electrochemical study of layered MnO <sub>2</sub> in rechargeable aqueous zinc-ion battery. <i>Electrochimica Acta</i> , <b>2018</b> , 276, 1-11	6.7	138
28	Aqueous rechargeable Zn-ion batteries: an imperishable and high-energy Zn <sub>2</sub> V <sub>2</sub> O <sub>7</sub> nanowire cathode through intercalation regulation. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 3850-3856	13	212
27	Pyrosynthesis of Na V (PO ) @C Cathodes for Safe and Low-Cost Aqueous Hybrid Batteries. <i>ChemSusChem</i> , <b>2018</b> , 11, 2239-2247	8.3	38
26	NaVO <sub>2</sub> ·H <sub>2</sub> O Barnesite Nanorod: An Open Door to Display a Stable and High Energy for Aqueous Rechargeable Zn-Ion Batteries as Cathodes. <i>Nano Letters</i> , <b>2018</b> , 18, 2402-2410	11.5	341
25	K <sub>2</sub> V <sub>6</sub> O <sub>16</sub> ·7H <sub>2</sub> O nanorod cathode: an advanced intercalation system for high energy aqueous rechargeable Zn-ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 15530-15539	13	132
24	Ambient redox synthesis of vanadium-doped manganese dioxide nanoparticles and their enhanced zinc storage properties. <i>Applied Surface Science</i> , <b>2017</b> , 404, 435-442	6.7	91
23	Electrochemical Zinc Intercalation in Lithium Vanadium Oxide: A High-Capacity Zinc-Ion Battery Cathode. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 1684-1694	9.6	342
22	Carbon-coated manganese dioxide nanoparticles and their enhanced electrochemical properties for zinc-ion battery applications. <i>Journal of Energy Chemistry</i> , <b>2017</b> , 26, 815-819	12	75
21	Monoclinic-Orthorhombic Na <sub>1.1</sub> Li <sub>2.0</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> /C Composite Cathode for Na <sup>+</sup> /Li <sup>+</sup> Hybrid-Ion Batteries. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 6642-6652	9.6	15
20	Carbon-coated rhombohedral Li <sub>2</sub> NaV <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> nanoflake cathode for Li-ion battery with excellent cycleability and rate capability. <i>Chemical Physics Letters</i> , <b>2017</b> , 681, 44-49	2.5	13
19	Facile synthesis and the exploration of the zinc storage mechanism of MnO <sub>2</sub> nanorods with exposed (101) planes as a novel cathode material for high performance eco-friendly zinc-ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 23299-23309	13	194
18	Ultrafine molybdenum oxycarbide nanoparticles embedded in N-doped carbon as a superior anode material for lithium-ion batteries. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 696, 143-149	5.7	12

17	One-Step Pyro-Synthesis of a Nanostructured Mn O /C Electrode with Long Cycle Stability for Rechargeable Lithium-Ion Batteries. <i>Chemistry - A European Journal</i> , <b>2016</b> , 22, 2039-2045	4.8	35
16	MOF-derived mesoporous anatase TiO <sub>2</sub> as anode material for lithium-ion batteries with high rate capability and long cycle stability. <i>Journal of Alloys and Compounds</i> , <b>2016</b> , 674, 174-178	5.7	67
15	A high surface area tunnel-type $\delta$ -MnO <sub>2</sub> nanorod cathode by a simple solvent-free synthesis for rechargeable aqueous zinc-ion batteries. <i>Chemical Physics Letters</i> , <b>2016</b> , 650, 64-68	2.5	103
14	Porous TiN nanoparticles embedded in a N-doped carbon composite derived from metal-organic frameworks as a superior anode in lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 4706-4710	13	26
13	Pyro-synthesis of Na <sub>2</sub> FeP <sub>2</sub> O <sub>7</sub> Nano-plates as Cathode for Sodium-ion Batteries with Long Cycle Stability. <i>Journal of the Korean Ceramic Society</i> , <b>2016</b> , 53, 406-410	2.2	7
12	An Enhanced High-Rate NaV(PO) <sub>4</sub> -NiP Nanocomposite Cathode with Stable Lifetime for Sodium-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 35235-35242	9.5	31
11	Hierarchical porous anatase TiO <sub>2</sub> derived from a titanium metal-organic framework as a superior anode material for lithium ion batteries. <i>Chemical Communications</i> , <b>2015</b> , 51, 12274-7	5.8	64
10	Enhanced reversible divalent zinc storage in a structurally stable $\delta$ -MnO <sub>2</sub> nanorod electrode. <i>Journal of Power Sources</i> , <b>2015</b> , 288, 320-327	8.9	240
9	A Porous TiO <sub>2</sub> Electrode Prepared by an Energy Efficient Pyro-Synthesis for Advanced Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , <b>2015</b> , 162, A1220-A1226	3.9	14
8	Electrochemically Induced Structural Transformation in a $\delta$ -MnO <sub>2</sub> Cathode of a High Capacity Zinc-Ion Battery System. <i>Chemistry of Materials</i> , <b>2015</b> , 27, 3609-3620	9.6	549
7	A layered $\delta$ -MnO <sub>2</sub> nanoflake cathode with high zinc-storage capacities for eco-friendly battery applications. <i>Electrochemistry Communications</i> , <b>2015</b> , 60, 121-125	5.1	307
6	Pyro-Synthesis of Nanostructured Spinel ZnMn <sub>2</sub> O <sub>4</sub> /C as Negative Electrode for Rechargeable Lithium-Ion Batteries. <i>Electrochimica Acta</i> , <b>2015</b> , 151, 558-564	6.7	37
5	Electrochemical lithium storage of a ZnFe <sub>2</sub> O <sub>4</sub> /graphene nanocomposite as an anode material for rechargeable lithium ion batteries. <i>RSC Advances</i> , <b>2014</b> , 4, 47087-47095	3.7	25
4	Morphology-controlled LiFePO <sub>4</sub> cathodes by a simple polyol reaction for Li-ion batteries. <i>Materials Characterization</i> , <b>2014</b> , 89, 93-101	3.9	19
3	A two-step solid state synthesis of LiFePO <sub>4</sub> /C cathode with varying carbon contents for Li-ion batteries. <i>Ceramics International</i> , <b>2014</b> , 40, 1561-1567	5.1	19
2	A rapid polyol combustion strategy towards scalable synthesis of nanostructured LiFePO <sub>4</sub> /C cathodes for Li-ion batteries. <i>Journal of Solid State Electrochemistry</i> , <b>2014</b> , 18, 1557-1567	2.6	21
1	A new material discovery platform of stable layered oxide cathodes for K-ion batteries. <i>Energy and Environmental Science</i> ,	35.4	7