

# Ortal Hanna

## 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.

90  
papers

13,960  
citations

39  
h-index

90  
g-index

90  
ext. papers

15,528  
ext. citations

9.9  
avg, IF

6.62  
L-index

#	Paper	IF	Citations
90	Double gas treatment: A successful approach for stabilizing the Li and Mn-rich NCM cathode materials electrochemical behavior. <i>Energy Storage Materials</i> , <b>2022</b> , 45, 74-91	19.4	3
89	Enhanced Performance of Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> (MXene) Electrodes in Concentrated ZnCl <sub>2</sub> Solutions: A Combined Electrochemical and EQCM-D Study. <i>Energy Storage Materials</i> , <b>2021</b> , 38, 535-541	19.4	13
88	Alumina thin coat on pre-charged soft carbon anode reduces electrolyte breakdown and maintains sodiation sites active in Na-ion battery [Insights from NMR measurements. <i>Journal of Solid State Chemistry</i> , <b>2021</b> , 298, 122121	3.3	1
87	MXene conductive binder for improving performance of sodium-ion anodes in water-in-salt electrolyte. <i>Nano Energy</i> , <b>2021</b> , 79, 105433	17.1	14
86	Understanding the Role of Alumina (Al <sub>2</sub> O <sub>3</sub> ), Pentalithium Aluminate (Li <sub>5</sub> AlO <sub>4</sub> ), and Pentasodium Aluminate (Na <sub>5</sub> AlO <sub>4</sub> ) Coatings on the Li and Mn-Rich NCM Cathode Material 0.33Li <sub>2</sub> MnO <sub>3</sub> ·0.67Li(Ni <sub>0.4</sub> Co <sub>0.2</sub> Mn <sub>0.4</sub> )O <sub>2</sub> for Enhanced Electrochemical Performance. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2008083	15.6	13
85	Sustainable existence of solid mercury (Hg) nanoparticles at room temperature and their applications. <i>Chemical Science</i> , <b>2021</b> , 12, 3226-3238	9.4	4
84	Combined nanofiltration and advanced oxidation processes with bifunctional carbon nanomembranes.. <i>RSC Advances</i> , <b>2021</b> , 11, 14777-14786	3.7	2
83	Can Anions Be Inserted into MXene?. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 12552-12559	16.4	19
82	Anions-capture materials for electrochemical electrode deionization: Mechanism, performance, and development prospects. <i>Desalination</i> , <b>2021</b> , 520, 115336	10.3	2
81	Horizons for Modern Electrochemistry Related to Energy Storage and Conversion, a Review. <i>Israel Journal of Chemistry</i> , <b>2021</b> , 61, 11-25	3.4	1
80	New aqueous energy storage devices comprising graphite cathodes, MXene anodes and concentrated sulfuric acid solutions. <i>Energy Storage Materials</i> , <b>2020</b> , 32, 1-10	19.4	17
79	Linking structure to performance of LiMnNiCoO (Li and Mn rich NMC) cathode materials synthesized by different methods. <i>Physical Chemistry Chemical Physics</i> , <b>2020</b> , 22, 9098-9109	3.6	15
78	Integral Role of the NiS Electrode/Electrolyte Interface in the Redox Reaction with Lithium. <i>Surface Engineering and Applied Electrochemistry</i> , <b>2020</b> , 56, 665-674	0.8	1
77	Mass-producible polyhedral macrotube carbon arrays with multi-hole cross-section profiles: superb 3D tertiary porous electrode materials for supercapacitors and capacitive deionization cells. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 16312-16322	13	13
76	On the challenge of large energy storage by electrochemical devices. <i>Electrochimica Acta</i> , <b>2020</b> , 354, 136771	6.7	25
75	Thermally reduced graphene oxide as an electrode for CDI processes: A compromise between performance and scalability?. <i>Desalination</i> , <b>2020</b> , 492, 114599	10.3	3
74	Controllable and stable organometallic redox mediators for lithium oxygen batteries. <i>Materials Horizons</i> , <b>2020</b> , 7, 214-222	14.4	13

73	Improving Amorphous Carbon Anodes for Na Ion Batteries by Surface Treatment of a Presodiated Electrode with AlO. <i>Langmuir</i> , <b>2019</b> , 35, 11670-11678	4	9
72	Quantification of porosity in extensively nanoporous thin films in contact with gases and liquids. <i>Nature Communications</i> , <b>2019</b> , 10, 4394	17.4	5
71	Superfast high-energy storage hybrid device composed of MXene and Chevrel-phase electrodes operated in saturated LiCl electrolyte solution. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 19761-19773	13	24
70	Aqueous Energy Storage Device Based on LiMn <sub>2</sub> O <sub>4</sub> (Spinel) Positive Electrode and Anthraquinone-Modified Carbon-Negative Electrode. <i>Energy Technology</i> , <b>2019</b> , 7, 1900589	3.5	4
69	Unveiling ionic diffusion in MgNiMnO <sub>4</sub> cathode material for Mg-ion batteries via combined computational and experimental studies. <i>Journal of Solid State Electrochemistry</i> , <b>2019</b> , 23, 3209-3216	2.6	7
68	Ammonia Treatment of 0.35Li <sub>2</sub> MnO <sub>3</sub> ·0.65LiNi <sub>0.35</sub> Mn <sub>0.45</sub> Co <sub>0.20</sub> O <sub>2</sub> Material: Insights from Solid-State NMR Analysis. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 3773-3779	3.8	13
67	In Situ Real-Time Mechanical and Morphological Characterization of Electrodes for Electrochemical Energy Storage and Conversion by Electrochemical Quartz Crystal Microbalance with Dissipation Monitoring. <i>Accounts of Chemical Research</i> , <b>2018</b> , 51, 69-79	24.3	62
66	Pushing the limit of layered transition metal oxide cathodes for high-energy density rechargeable Li ion batteries. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 1271-1279	35.4	225
65	Na-ion battery cathode materials prepared by electrochemical ion exchange from alumina-coated Li <sub>1+x</sub> Mn <sub>0.54</sub> Co <sub>0.13</sub> Ni <sub>0.1+y</sub> O <sub>2</sub> . <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 14816-14827	13	16
64	Review A Comparative Evaluation of Redox Mediators for Li-O <sub>2</sub> Batteries: A Critical Review. <i>Journal of the Electrochemical Society</i> , <b>2018</b> , 165, A2274-A2293	3.9	51
63	Direct Assessment of Nanoconfined Water in 2D TiC Electrode Interspaces by a Surface Acoustic Technique. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 8910-8917	16.4	66
62	Electrochemical performance of Na <sub>0.6</sub> [Li <sub>0.2</sub> Ni <sub>0.2</sub> Mn <sub>0.6</sub> ]O <sub>2</sub> cathodes with high-working average voltage for Na-ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 5858-5864	13	30
61	Aqueous energy-storage cells based on activated carbon and LiMn <sub>2</sub> O <sub>4</sub> electrodes. <i>Journal of Power Sources</i> , <b>2017</b> , 354, 148-156	8.9	26
60	Carbon-based composite materials for supercapacitor electrodes: a review. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 12653-12672	13	842
59	Review Recent Advances and Remaining Challenges for Lithium Ion Battery Cathodes. <i>Journal of the Electrochemical Society</i> , <b>2017</b> , 164, A6220-A6228	3.9	442
58	Sodium oxygen batteries: one step further with catalysis by ruthenium nanoparticles. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 20678-20686	13	21
57	Optimized Bicompartement Two Solution Cells for Effective and Stable Operation of Li <sub>2</sub> O <sub>2</sub> Batteries. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1701232	21.8	54
56	Feasibility of Full (Li-Ion)-O Cells Comprised of Hard Carbon Anodes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 4352-4361	9.5	30

55	Electrochemical Quartz Crystal Microbalance with Dissipation Real-Time Hydrodynamic Spectroscopy of Porous Solids in Contact with Liquids. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 10151-10157	7.8	17
54	Advances in understanding mechanisms underpinning lithium-air batteries. <i>Nature Energy</i> , <b>2016</b> , 1,	62.3	834
53	Activated Carbon Modified with Carbon Nanodots as Novel Electrode Material for Supercapacitors. <i>Journal of Physical Chemistry C</i> , <b>2016</b> , 120, 13406-13413	3.8	59
52	Mechanistic Role of Li <sup>+</sup> Dissociation Level in Aprotic Li-O <sub>2</sub> Battery. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 5300-7	9.5	106
51	Effect of cycling conditions on the electrochemical performance of high capacity Li and Mn-rich cathodes for Li-ion batteries. <i>Journal of Power Sources</i> , <b>2016</b> , 318, 9-17	8.9	35
50	Li <sub>2</sub> O <sub>2</sub> cells with LiBr as an electrolyte and a redox mediator. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 2334-2345	35.4	190
49	Preparation and Properties of Metal Organic Framework/Activated Carbon Composite Materials. <i>Langmuir</i> , <b>2016</b> , 32, 4935-44	4	76
48	Understanding the behavior of Li <sup>+</sup> /oxygen cells containing LiI. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 8855-8864	13	169
47	Electrochemical Performance of a Layered-Spinel Integrated Li[Ni <sub>1/3</sub> Mn <sub>2/3</sub> ]O <sub>2</sub> as a High Capacity Cathode Material for Li-Ion Batteries. <i>Chemistry of Materials</i> , <b>2015</b> , 27, 2600-2611	9.6	44
46	Use of 1,10-Phenanthroline as an Additive for High-Performance Supercapacitors. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 12165-12173	3.8	33
45	Metal-organic complexes as redox candidates for carbon based pseudo-capacitors. <i>Journal of Materials Chemistry A</i> , <b>2014</b> , 2, 18132-18138	13	15
44	Conversion of LiMn <sub>2</sub> Co <sub>x</sub> O <sub>4</sub> spinel on the basis of electrolytically Co-deposited Mn,Co-oxide precursors in a lithium battery. <i>Russian Journal of Applied Chemistry</i> , <b>2014</b> , 87, 1260-1267	0.8	1
43	Studies of Li and Mn-Rich Li <sub>x</sub> [MnNiCo]O <sub>2</sub> Electrodes: Electrochemical Performance, Structure, and the Effect of the Aluminum Fluoride Coating. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A2220-A2233	3.9	78
42	Hierarchical activated carbon microfiber (ACM) electrodes for rechargeable Li <sub>2</sub> O <sub>2</sub> batteries. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 5021	13	50
41	Study of the Lithium-Rich Integrated Compound xLi <sub>2</sub> MnO <sub>3</sub> [(1-x)LiMO <sub>2</sub> (x around 0.5; M = Mn, Ni, Co; 2:2:1) and Its Electrochemical Activity as Positive Electrode in Lithium Cells. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A324-A337	3.9	109
40	The Study of Activated Carbon/CNT/MoO <sub>3</sub> Electrodes for Aqueous Pseudo-Capacitors. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A1489-A1496	3.9	18
39	Composite Carbon Nano-Tubes (CNT)/Activated Carbon Electrodes for Non-Aqueous Super Capacitors Using Organic Electrolyte Solutions. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A1282-A1285	3.9	35
38	Composite carbon nanotube/carbon electrodes for electrical double-layer super capacitors. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 1568-71	16.4	84

37	Ultrafast anode for high voltage aqueous Li-ion batteries. <i>Journal of Solid State Electrochemistry</i> , <b>2012</b> , 16, 3443-3448	2.6	8
36	Challenges in the development of advanced Li-ion batteries: a review. <i>Energy and Environmental Science</i> , <b>2011</b> , 4, 3243	35.4	4665
35	The electrochemistry of activated carbonaceous materials: past, present, and future. <i>Journal of Solid State Electrochemistry</i> , <b>2011</b> , 15, 1563-1578	2.6	132
34	Assessing the Concentration Effect on Hydration Radii in Aqueous Solutions by Electroadsorption on a Carbon Molecular Sieve Electrode. <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 13354-13361	3.8	14
33	On the Way to Rechargeable Mg Batteries: The Challenge of New Cathode Materials— <i>Chemistry of Materials</i> , <b>2010</b> , 22, 860-868	9.6	441
32	Integrated Materials $x\text{Li}_{2}\text{MnO}_{3}?(1-x)\text{LiMn}_{1/3}\text{Ni}_{1/3}\text{Co}_{1/3}\text{O}_{2}$ ( $x=0.3, 0.5, 0.7$ ) Synthesized. <i>Journal of the Electrochemical Society</i> , <b>2010</b> , 157, A1121	3.9	173
31	A review on the problems of the solid state ions diffusion in cathodes for rechargeable Mg batteries. <i>Journal of Electroceramics</i> , <b>2009</b> , 22, 13-19	1.5	185
30	Development of Anion Stereoselective, Activated Carbon Molecular Sieve Electrodes Prepared by Chemical Vapor Deposition. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 7316-7321	3.8	32
29	The Rate-Determining Step of Electroadsorption Processes into Nanoporous Carbon Electrodes Related to Water Desalination. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 21319-21327	3.8	69
28	Review on Engineering and Characterization of Activated Carbon Electrodes for Electrochemical Double Layer Capacitors and Separation Processes. <i>Israel Journal of Chemistry</i> , <b>2008</b> , 48, 287-303	3.4	16
27	Kinetics of electrochemically induced phase transitions in ion-insertion electrodes and the chemical diffusion coefficient. <i>Journal of Solid State Electrochemistry</i> , <b>2008</b> , 12, 409-420	2.6	13
26	Carbon Electrodes Modified with $\text{TiO}_2$ /Metal Nanoparticles and Their Application for the Detection of Trinitrotoluene. <i>Advanced Functional Materials</i> , <b>2007</b> , 17, 1487-1492	15.6	63
25	Progress in Rechargeable Magnesium Battery Technology. <i>Advanced Materials</i> , <b>2007</b> , 19, 4260-4267	24	403
24	The application of electroanalytical methods to the analysis of phase transitions during intercalation of ions into electrodes. <i>Journal of Solid State Electrochemistry</i> , <b>2007</b> , 11, 1031-1042	2.6	36
23	Testing Carbon-Coated $\text{VO}_x$ Prepared via Reaction under Autogenic Pressure at Elevated Temperature as Li-Insertion Materials. <i>Advanced Materials</i> , <b>2006</b> , 18, 1431-1436	24	141
22	Assessing optimal pore-to-ion size relations in the design of porous poly(vinylidene chloride) carbons for EDL capacitors. <i>Applied Physics A: Materials Science and Processing</i> , <b>2006</b> , 82, 607-613	2.6	51
21	The effect of milling on the performance of a $\text{Mo}_6\text{S}_8$ Chevrel phase as a cathode material for rechargeable Mg batteries. <i>Journal of Solid State Electrochemistry</i> , <b>2005</b> , 9, 259-266	2.6	39
20	Kinetic and Thermodynamic Studies of $\text{Mg}^{2+}$ and $\text{Li}^{+}$ Ion Insertion into the $\text{Mo}_6\text{S}_8$ Chevrel Phase. <i>Journal of the Electrochemical Society</i> , <b>2004</b> , 151, A1044	3.9	70

19	Effect of the Structure of Nonuniform Conducting Polymer Films on Their Electrochemical Impedance Response. <i>Russian Journal of Electrochemistry</i> , <b>2004</b> , 40, 273-279	1.2	8
18	Sonochemical and soft-chemical intercalation of lithium ions into MnO <sub>2</sub> polymorphs. <i>Journal of Solid State Electrochemistry</i> , <b>2004</b> , 8, 957-967	2.6	11
17	Impedance of a Single Intercalation Particle and of Non-Homogeneous, Multilayered Porous Composite Electrodes for Li-ion Batteries. <i>Journal of Physical Chemistry B</i> , <b>2004</b> , 108, 11693-11703	3.4	150
16	Neutralization of used Li batteries: Anodic dissolution of the iron/nickel alloy positive pins of LiBOCl <sub>2</sub> batteries in seawater. <i>Journal of Applied Electrochemistry</i> , <b>2003</b> , 33, 989-993	2.6	
15	Noteworthy electroanalytical features of the stage 4 to stage 3 phase transition in lithiated graphite. <i>Journal of Solid State Electrochemistry</i> , <b>2003</b> , 8, 40-43	2.6	14
14	Micromorphological Dynamics of Polypyrrole Films in Propylene Carbonate Solutions Studied by in Situ AFM and EQCM. <i>Langmuir</i> , <b>2003</b> , 19, 9804-9811	4	36
13	An Aqueous Reduction Method To Synthesize Spinel-LiMn <sub>2</sub> O <sub>4</sub> Nanoparticles as a Cathode Material for Rechargeable Lithium-Ion Batteries. <i>Chemistry of Materials</i> , <b>2003</b> , 15, 4211-4216	9.6	51
12	Electroanalytical features of non-uniformly doped conducting poly-3-(3,4,5-trifluorophenyl)thiophene films. <i>Physical Chemistry Chemical Physics</i> , <b>2003</b> , 5, 2886	3.6	15
11	A Synopsis of recent attempts toward construction of rechargeable batteries utilizing conducting polymer cathodes and anodes. <i>Polymers for Advanced Technologies</i> , <b>2002</b> , 13, 697-713	3.2	40
10	Influence of pH on the Structure of the Aqueous Sonolysis Products of Manganese(III) Acetylacetonate. <i>Journal of Materials Research</i> , <b>2002</b> , 17, 1706-1710	2.5	4
9	Prototype systems for rechargeable magnesium batteries. <i>Nature</i> , <b>2000</b> , 407, 724-7	50.4	1560
8	Preparation of amorphous magnetite nanoparticles embedded in polyvinyl alcohol using ultrasound radiation. <i>Journal of Materials Chemistry</i> , <b>2000</b> , 10, 1125-1129		165
7	New insights into the interactions between electrode materials and electrolyte solutions for advanced nonaqueous batteries. <i>Journal of Power Sources</i> , <b>1999</b> , 81-82, 95-111	8.9	375
6	The Study of Surface Film Formation on Noble-Metal Electrodes in Alkyl Carbonates/Li Salt Solutions, Using Simultaneous in Situ AFM, EQCM, FTIR, and EIS. <i>Langmuir</i> , <b>1999</b> , 15, 2947-2960	4	120
5	Behavior of lithiated graphite electrodes comprising silica based binder. <i>Journal of Applied Electrochemistry</i> , <b>1998</b> , 28, 1051-1059	2.6	21
4	Recent Studies of Interfacial Phenomena which Determine the Electrochemical Behavior of Lithium and Lithiated Carbon Anodes with the Emphasis on In Situ Techniques. <i>Materials Research Society Symposia Proceedings</i> , <b>1997</b> , 496, 587		1
3	Simultaneous Measurements and Modeling of the Electrochemical Impedance and the Cyclic Voltammetric Characteristics of Graphite Electrodes Doped with Lithium. <i>Journal of Physical Chemistry B</i> , <b>1997</b> , 101, 4630-4640	3.4	442
2	Diffusion Coefficients of Lithium Ions during Intercalation into Graphite Derived from the Simultaneous Measurements and Modeling of Electrochemical Impedance and Potentiostatic Intermittent Titration Characteristics of Thin Graphite Electrodes. <i>Journal of Physical Chemistry B</i> , <b>1997</b> , 101, 4641-4647	3.4	354

- 1 Toward High Performance All Solid-State Na Batteries: Investigation of Electrolytes Comprising NaPF<sub>6</sub>, Poly(ethylene oxide) and TiO<sub>2</sub>. *Journal of the Electrochemical Society*, 3.9 3