

# Ortal Hanna

## List of Publications by Citations

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ext. papers

15,528  
ext. citations

9.9  
avg, IF

6.62  
L-index

#	Paper	IF	Citations
90	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
89	Prototype systems for rechargeable magnesium batteries. <i>Nature</i> , <b>2000</b> , 407, 724-7	50.4	1560
88	Carbon-based composite materials for supercapacitor electrodes: a review. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 12653-12672	13	842
87	Advances in understanding mechanisms underpinning lithium-air batteries. <i>Nature Energy</i> , <b>2016</b> , 1,	62.3	834
86	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
85	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
84	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
83	Progress in Rechargeable Magnesium Battery Technology. <i>Advanced Materials</i> , <b>2007</b> , 19, 4260-4267	24	403
82	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
81	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
80	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
79	Li <sub>2</sub> O 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
78	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
77	Integrated Materials xLi <sub>2</sub> MnO <sub>3</sub> ·(1-x)LiMn <sub>1/3</sub> Ni <sub>1/3</sub> Co <sub>1/3</sub> O <sub>2</sub> (x=0.3, 0.5, 0.7) Synthesized. <i>Journal of the Electrochemical Society</i> , <b>2010</b> , 157, A1121	3.9	173
76	Understanding the behavior of Li-Oxygen cells containing Lil. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 8855-8864	13	169
75	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
74	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

73	Testing Carbon-Coated VOx 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
72	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
71	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
70	Study of the Lithium-Rich Integrated Compound $x\text{Li}_2\text{MnO}_3[(1-x)\text{LiMO}_2]$ ( $x$ around 0.5; $M = \text{Mn, Ni, Co}$ ; 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
69	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
68	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
67	Studies of Li and Mn-Rich $\text{Li}_x[\text{MnNiCo}]_2\text{O}_2$ 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
66	Preparation and Properties of Metal Organic Framework/Activated Carbon Composite Materials. <i>Langmuir</i> , <b>2016</b> , 32, 4935-44	4	76
65	Kinetic and Thermodynamic Studies of Mg <sup>[sup 2+]</sup> and Li <sup>[sup +]</sup> Ion Insertion into the Mo <sub>6</sub> S <sub>8</sub> Chevrel Phase. <i>Journal of the Electrochemical Society</i> , <b>2004</b> , 151, A1044	3.9	70
64	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
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	Carbon Electrodes Modified with TiO <sub>2</sub> /Metal Nanoparticles and Their Application for the Detection of Trinitrotoluene. <i>Advanced Functional Materials</i> , <b>2007</b> , 17, 1487-1492	15.6	63
61	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
60	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
59	Optimized Bicompartement Two Solution Cells for Effective and Stable Operation of LiO <sub>2</sub> Batteries. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1701232	21.8	54
58	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
57	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
56	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

55	Hierarchical activated carbon microfiber (ACM) electrodes for rechargeable LiO <sub>2</sub> batteries. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 5021	13	50
54	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
53	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
52	The effect of milling on the performance of a Mo <sub>6</sub> S <sub>8</sub> 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
51	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
50	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
49	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
48	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
47	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
46	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
45	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
44	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
43	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
42	On the challenge of large energy storage by electrochemical devices. <i>Electrochimica Acta</i> , <b>2020</b> , 354, 136771	6.7	25
41	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
40	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
39	Behavior of lithiated graphite electrodes comprising silica based binder. <i>Journal of Applied Electrochemistry</i> , <b>1998</b> , 28, 1051-1059	2.6	21
38	Can Anions Be Inserted into MXene?. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 12552-12559	16.4	19

37	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
36	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
35	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
34	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
33	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
32	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
31	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
30	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
29	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
28	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
27	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
26	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
25	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
24	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
23	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
22	Controllable and stable organometallic redox mediators for lithium oxygen batteries. <i>Materials Horizons</i> , <b>2020</b> , 7, 214-222	14.4	13
21	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
20	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

19	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
18	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
17	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
16	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
15	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
14	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
13	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
12	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
11	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
10	Toward High Performance All Solid-State Na Batteries: Investigation of Electrolytes Comprising NaPF <sub>6</sub> , Poly(ethylene oxide) and TiO <sub>2</sub> . <i>Journal of the Electrochemical Society</i> ,	3.9	3
9	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
8	Combined nanofiltration and advanced oxidation processes with bifunctional carbon nanomembranes.. <i>RSC Advances</i> , <b>2021</b> , 11, 14777-14786	3.7	2
7	Anions-capture materials for electrochemical electrode deionization: Mechanism, performance, and development prospects. <i>Desalination</i> , <b>2021</b> , 520, 115336	10.3	2
6	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
5	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
4	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
3	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
2	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

- 1 Neutralization of used Li batteries: Anodic dissolution of the iron-nickel alloy positive pins of LiBOCl<sub>2</sub> batteries in seawater. *Journal of Applied Electrochemistry*, **2003**, 33, 989-993 2.6