

# Emilia Olsson

## List of Publications by Year in descending order

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Version: 2024-02-01

35  
papers

1,055  
citations

471371

17  
h-index

434063

31  
g-index

36  
all docs

36  
docs citations

36  
times ranked

1194  
citing authors

#	ARTICLE	IF	CITATIONS
1	A revised mechanistic model for sodium insertion in hard carbons. <i>Energy and Environmental Science</i> , 2020, 13, 3469-3479.	15.6	195
2	Adsorption and migration of alkali metals (Li, Na, and K) on pristine and defective graphene surfaces. <i>Nanoscale</i> , 2019, 11, 5274-5284.	2.8	149
3	Molecular-Level Design of Pyrrhotite Electrocatalyst Decorated Hierarchical Porous Carbon Spheres as Nanoreactors for Lithium-Sulfur Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2000651.	10.2	101
4	Sodium Storage Mechanism Investigations through Structural Changes in Hard Carbons. <i>ACS Applied Energy Materials</i> , 2020, 3, 9918-9927.	2.5	56
5	Atomic-Scale Design of Anode Materials for Alkali Metal (Li/Na/K) Ion Batteries: Progress and Perspectives. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	56
6	Elucidating the Effect of Planar Graphitic Layers and Cylindrical Pores on the Storage and Diffusion of Li, Na, and K in Carbon Materials. <i>Advanced Functional Materials</i> , 2020, 30, 1908209.	7.8	49
7	Theoretical Insights of Ni <sub>2</sub> P (0001) Surface toward Its Potential Applicability in CO <sub>2</sub> Conversion via Dry Reforming of Methane. <i>ACS Catalysis</i> , 2019, 9, 3487-3497.	5.5	36
8	The adsorption and migration behavior of divalent metals (Mg, Ca, and Zn) on pristine and defective graphene. <i>Carbon</i> , 2020, 163, 276-287.	5.4	36
9	Synthesis of Bi <sub>2</sub> S <sub>3</sub> /carbon nanocomposites as anode materials for lithium-ion batteries. <i>Journal of Materials Science and Technology</i> , 2020, 50, 92-102.	5.6	35
10	Local mobility in electrochemically inactive sodium in hard carbon anodes after the first cycle. <i>Journal of Materials Chemistry A</i> , 2020, 8, 743-749.	5.2	28
11	Functionalized Two-Dimensional Nanoporous Graphene as Efficient Global Anode Materials for Li-, Na-, K-, Mg-, and Ca-Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2020, 124, 9734-9745.	1.5	28
12	Defects in Hard Carbon: Where Are They Located and How Does the Location Affect Alkaline Metal Storage?. <i>Small</i> , 2021, 17, e2007652.	5.2	28
13	Introducing 4 <i>s</i> Orbital Hybridization to Stabilize Spinel Oxide Cathodes for Lithium Ion Batteries. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	26
14	Ab initio study of vacancy formation in cubic LaMnO <sub>3</sub> and SmCoO <sub>3</sub> as cathode materials in solid oxide fuel cells. <i>Journal of Chemical Physics</i> , 2016, 145, 014703.	1.2	25
15	A novel amorphous P <sub>4</sub> SSe <sub>2</sub> compound as an advanced anode for sodium-ion batteries in ether-based electrolytes. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12029-12040.	5.2	21
16	Computational study of the mixed B-site perovskite SmB <sub>x</sub> Co <sub>1-x</sub> O <sub>3</sub> (B = Mn, Fe, Ni, Cu) for next generation solid oxide fuel cell cathodes. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 9407-9418.	1.3	20
17	Investigating the effect of edge and basal plane surface functionalisation of carbonaceous anodes for alkali metal (Li/Na/K) ion batteries. <i>Carbon</i> , 2021, 177, 226-243.	5.4	19
18	Elucidation of the Solid Electrolyte Interphase Formation Mechanism in Micro-Mesoporous Hard-Carbon Anodes. <i>Advanced Materials Interfaces</i> , 2022, 9, 2101267.	1.9	18

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19	A computational study of the electronic properties, ionic conduction, and thermal expansion of $\text{Sm}_{1-x}\text{A}_x\text{CoO}_3$ and $\text{Sm}_{1-x}\text{A}_x\text{CoO}_{3/2}$ (A = $\text{Ba}^{2+}$ , $\text{Ca}^{2+}$ ), <i>Tj ETQq1130.784314 rgBT</i> <i>Journal of Chemical Physics</i> , 2017, 145, 13860-13869.	1.3	14
20	Synthesis and Electrochemical Properties of $\text{Bi}_2\text{MoO}_6$ /Carbon Anode for Lithium-Ion Battery Application. <i>Materials</i> , 2020, 13, 1132.	1.3	16
21	A DFT+U study of the structural, electronic, magnetic, and mechanical properties of cubic and orthorhombic $\text{SmCoO}_3$ . <i>Journal of Chemical Physics</i> , 2016, 145, 224704.	1.2	15
22	Introducing $4d$ Orbital Hybridization to Stabilize Spinel Oxide Cathodes for Lithium-Ion Batteries. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	12
23	Structural, elastic, vibrational and electronic properties of amorphous $\text{Sm}_2\text{O}_3$ from Ab Initio calculations. <i>Computational Materials Science</i> , 2019, 169, 109119.	1.4	10
24	Combined density functional theory and molecular dynamics study of $\text{Sm}_{0.75}\text{A}_{0.25}\text{Co}_{1-x}\text{Mn}_x\text{O}_{2.88}$ (A = Ca, Sr); <i>Tj ETQq0 0 0 rgBT /Overl</i> <i>Journal of Chemical Physics</i> , 2020, 22, 692-699.	1.3	10
25	Modeling of Diffusion and Incorporation of Interstitial Oxygen Ions at the $\text{TiN}/\text{SiO}_2$ Interface. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 36232-36243.	4.0	9
26	Prediction of the Liquid-Liquid Extraction Properties of Imidazolium-Based Ionic Liquids for the Extraction of Aromatics from Aliphatics. <i>Journal of Chemical Information and Modeling</i> , 2021, 61, 3376-3385.	2.5	8
27	Xenon Ion Implantation Induced Surface Compressive Stress for Preventing Dendrite Penetration in Solid-State Electrolytes. <i>Small</i> , 2022, 18, e2108124.	5.2	8
28	Lithium-Sulfur Batteries: Molecular-Level Design of Pyrrhotite Electrocatalyst Decorated Hierarchical Porous Carbon Spheres as Nanoreactors for Lithium-Sulfur Batteries ( <i>Adv. Energy</i> ) <i>Tj ETQq0 0 0 rgBT /Overl</i> <i>Adv. Energy</i> , 2022, 10, 2100000.	1.0	10
29	Voltage plateau variation in a bismuth-potassium battery. <i>Journal of Materials Chemistry A</i> , 2022, 10, 2917-2923.	5.2	6
30	Publisher's Note: Ab initio study of vacancy formation in cubic $\text{LaMnO}_3$ and $\text{SmCoO}_3$ as cathode materials in solid oxide fuel cells. <i>J. Chem. Phys.</i> 145, 014703 (2016)]. <i>Journal of Chemical Physics</i> , 2016, 145, 199901.	1.2	2
31	Carbon-Based Anode Materials for Alkali Metal Ion Batteries – Atomic Scale Studies of Defects, Functional Groups, and Electrolytes and Their Impact on Metal Storage and Diffusion. <i>ECS Meeting Abstracts</i> , 2019, .	0.0	0
32	Atomic Scale Insight into Metal Storage and Migration in Novel Anode Materials for Next Generation Battery Technologies. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 350-350.	0.0	0
33	Alkali Ion Storage and Migration in Carbonaceous Anode Materials – an Atomic Scale Study. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 113-113.	0.0	0
34	Elucidation of the Solid Electrolyte Interphase Formation Mechanism in Micro-Mesoporous Hard Carbon Anodes ( <i>Adv. Mater. Interfaces</i> 8/2022). <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	0
35	Hard Carbon Ethylene Carbonate Interfaces – Atomic Scale Insight into Surface Termination, Defects, Functional Groups, and Roughness on Electrolyte Breakdown, Metal Adsorption, Intercalation and Nucleation. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 816-816.	0.0	0