

# Ekaterina Pomerantseva

## List of Publications by Year in descending order

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Version: 2024-02-01

47  
papers

4,321  
citations

331670

21  
h-index

289244

40  
g-index

47  
all docs

47  
docs citations

47  
times ranked

6409  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Energy storage: The future enabled by nanomaterials. <i>Science</i> , 2019, 366, .  | 12.6 | 1,119     |
| 2  | Two-dimensional heterostructures for energy storage. <i>Nature Energy</i> , 2017, 2, .  | 39.5 | 747       |
| 3  | Porous heterostructured MXene/carbon nanotube composite paper with high volumetric capacity for sodium-based energy storage devices. <i>Nano Energy</i> , 2016, 26, 513-523.  | 16.0 | 710       |
| 4  | The role of vacancies and defects in Na <sub>0.44</sub> MnO <sub>2</sub> nanowire catalysts for lithium-oxygen batteries. <i>Energy and Environmental Science</i> , 2012, 5, 9558.  | 30.8 | 169       |
| 5  | Tunnel structured manganese oxide nanowires as redox active electrodes for hybrid capacitive deionization. <i>Nano Energy</i> , 2018, 44, 476-488.  | 16.0 | 145       |
| 6  | Alkali-induced crumpling of Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> (MXene) to form 3D porous networks for sodium ion storage. <i>Chemical Communications</i> , 2018, 54, 4533-4536.  | 4.1  | 135       |
| 7  | Ordering Heterogeneity of [MnO <sub>6</sub> ] Octahedra in Tunnel-Structured MnO <sub>2</sub> and Its Influence on Ion Storage. <i>Joule</i> , 2019, 3, 471-484.  | 24.0 | 123       |
| 8  | Hierarchical Three-Dimensional Microbattery Electrodes Combining Bottom-Up Self-Assembly and Top-Down Micromachining. <i>ACS Nano</i> , 2012, 6, 6422-6432.   | 14.6 | 116       |
| 9  | Mesoporous MXene powders synthesized by acid induced crumpling and their use as Na-ion battery anodes. <i>Materials Research Letters</i> , 2018, 6, 230-235.  | 8.7  | 115       |
| 10 | Bilayered vanadium oxides by chemical pre-intercalation of alkali and alkali-earth ions as battery electrodes. <i>Energy Storage Materials</i> , 2018, 11, 30-37.   | 18.0 | 108       |
| 11 | Chemically Preintercalated Bilayered K <sub>x</sub> V <sub>2</sub> O <sub>5</sub> ·nH <sub>2</sub> O Nanobelts as a High-Performing Cathode Material for K-Ion Batteries. <i>ACS Energy Letters</i> , 2018, 3, 562-567.                   | 17.4 | 104       |
| 12 | Voltage-Gated Ions Sieving through 2D MXene Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> Membranes. <i>ACS Applied Nano Materials</i> , 2018, 1, 3644-3652.  | 5.0  | 102       |
| 13 | High-Capacity All-Solid-State Sodium Metal Battery with Hybrid Polymer Electrolytes. <i>Advanced Energy Materials</i> , 2018, 8, 1801885.   | 19.5 | 87        |
| 14 | Stable high-voltage aqueous pseudocapacitive energy storage device with slow self-discharge. <i>Nano Energy</i> , 2019, 64, 103961.   | 16.0 | 78        |
| 15 | Ion Removal Performance, Structural/Compositional Dynamics, and Electrochemical Stability of Layered Manganese Oxide Electrodes in Hybrid Capacitive Deionization. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 32313-32322. | 8.0  | 67        |
| 16 | Deciphering the Atomic Patterns Leading to MnO <sub>2</sub> Polymorphism. <i>CheM</i> , 2019, 5, 1793-1805.   | 11.7 | 46        |
| 17 | Effect of aging and hydrothermal treatment on electrochemical performance of chemically pre-intercalated NaVO nanowires for Na-ion batteries. <i>Journal of Materials Chemistry A</i> , 2016, 4, 7754-7761.                               | 10.3 | 44        |
| 18 | Rational Design of Titanium Carbide MXene Electrode Architectures for Hybrid Capacitive Deionization. <i>Energy and Environmental Materials</i> , 2020, 3, 398-404.   | 12.8 | 42        |

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|----|---|------|-----------|
| 19 | Influence of operating conditions and cathode parameters on desalination performance of hybrid CDI systems. <i>Desalination</i> , 2019, 452, 1-8.   | 8.2  | 36        |
| 20 | Emerging nanostructured electrode materials for water electrolysis and rechargeable beyond Li-ion batteries. <i>Advances in Physics: X</i> , 2017, 2, 211-253.  | 4.1  | 25        |
| 21 | MXene-Derived Bilayered Vanadium Oxides with Enhanced Stability in Li-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 10892-10901.  | 5.1  | 21        |
| 22 | Improving Electronic Conductivity of Layered Oxides through the Formation of Two-Dimensional Heterointerface for Intercalation Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 3835-3844.                                       | 5.1  | 21        |
| 23 | Annealing-Assisted Enhancement of Electrochemical Stability of Na-Preintercalated Bilayered Vanadium Oxide Electrodes in Na-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 1063-1075.                                      | 5.1  | 20        |
| 24 | Bilayered vanadium oxide as the host material for reversible beyond lithium ion intercalation. <i>Advanced Materials Letters</i> , 2017, 8, 679-688.  | 0.6  | 20        |
| 25 | Revealing the Atomic Structures of Exposed Lateral Surfaces for Polymorphic Manganese Dioxide Nanowires. <i>Small Structures</i> , 2021, 2, 2000091.  | 12.0 | 18        |
| 26 | Prediction of optimal structural water concentration for maximized performance in tunnel manganese oxide electrodes. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 9480-9487.  | 2.8  | 12        |
| 27 | Composite Li-ion battery cathodes formed via integration of carbon nanotubes or graphene nanoplatelets into chemical preintercalation synthesis of bilayered vanadium oxides. <i>Journal of Alloys and Compounds</i> , 2022, 903, 163929. | 5.5  | 12        |
| 28 | Brittle fracture to recoverable plasticity: polytypism-dependent nanomechanics in todorokite-like nanobelts. <i>Nanoscale Advances</i> , 2019, 1, 357-366.  | 4.6  | 9         |
| 29 | Phase transformation and electrochemical charge storage properties of vanadium oxide/carbon composite electrodes synthesized via integration with dopamine. <i>Journal of the American Ceramic Society</i> , 2023, 106, 120-132.          | 3.8  | 9         |
| 30 | Improved electrochemical cycling stability of intercalation battery electrodes via control of material morphology. <i>Ionics</i> , 2019, 25, 493-502.   | 2.4  | 8         |
| 31 | The effect of chemically preintercalated alkali ions on the structure of layered titanates and their electrochemistry in aqueous energy storage systems. <i>Journal of Materials Chemistry A</i> , 2020, 8, 18220-18231.                  | 10.3 | 8         |
| 32 | Synthesis strategies toward improved ordering of [MnO <sub>6</sub> ] octahedra in tunnel structured 2 $\times$ 2 $\times$ 3 and 2 $\times$ 2 $\times$ 4 MnO <sub>2</sub> . <i>Scripta Materialia</i> , 2021, 195, 113713.                 | 5.2  | 8         |
| 33 | Hierarchically structured MoO <sub>2</sub> /dopamine-derived carbon spheres as intercalation electrodes for lithium-ion batteries. <i>Materials Today Chemistry</i> , 2022, 24, 100783.   | 3.5  | 7         |
| 34 | Tunable nanomechanical performance regimes in ceramic nanowires. <i>Nanotechnology</i> , 2019, 30, 47LT02.  | 2.6  | 6         |
| 35 | Creation of controllable cationic and anionic defects in tunnel manganese oxide nanowires for enhanced oxygen evolution reaction. <i>Polyhedron</i> , 2019, 171, 32-40.   | 2.2  | 5         |
| 36 | Free-standing bilayered vanadium oxide films synthesized by liquid exfoliation of chemically preintercalated $\delta$ -Li <sub>x</sub> V <sub>2</sub> O <sub>5</sub> ·nH <sub>2</sub> O. <i>Materials Advances</i> , 2021, 2, 2711-2718.  | 5.4  | 3         |

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|----|--|-----|-----------|
| 37 | The Dopamine Assisted Synthesis of MoO <sub>3</sub> /Carbon Electrodes With Enhanced Capacitance in Aqueous Electrolyte. <i>Frontiers in Chemistry</i> , 2022, 10, 873462.       | 3.6 | 3         |
| 38 | Acid-leached $\delta$ -MnO <sub>2</sub> nanowires for electrochemical energy storage. , 2014, , .  |     | 2         |
| 39 | Effect of 1D diffusion channel size and ionic content on Li <sup>+</sup> ion and Na <sup>+</sup> ion diffusion in tunnel manganese oxides. <i>Materialia</i> , 2021, 15, 101013. | 2.7 | 2         |
| 40 | Reversible intercalation of lithium and sodium ions into layered and tunnel structured manganese oxides: one-dimensional versus two-dimensional diffusion. , 2017, , .           |     | 2         |
| 41 | The ion dependent change in the mechanism of charge storage of chemically preintercalated bilayered vanadium oxide electrodes. , 2017, , .                                       |     | 2         |
| 42 | Synthesis of hybrid layered electrode materials via chemical pre-intercalation of linear organic molecules. , 2018, , .  |     | 2         |
| 43 | Chemical preintercalation synthesis approach for the formation of new layered tungsten oxides. <i>Journal of Materials Science</i> , 2022, 57, 7814-7826.                        | 3.7 | 2         |
| 44 | Tunnel Intergrowth Structures in Manganese Dioxide and Their Influence on Ion Storage. <i>Microscopy and Microanalysis</i> , 2018, 24, 1500-1501.                                | 0.4 | 1         |
| 45 | Layered manganese oxides as electrodes for water desalination via hybrid capacitive deionization. , 2018, , .  |     | 0         |
| 46 | Effect of annealing on electrochemical stability of chemically preintercalated bilayered vanadium oxide cathodes in batteries. , 2019, , .                                       |     | 0         |
| 47 | HCDI performance of Na-2x3 and Na-2x4 nanowires for water desalination. , 2019, , .  |     | 0         |