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| Title | Aqueous Magnesium Zinc Hybrid Battery: An Advanced High-Voltage and High-Energy MgMn2O4 Cathode | | |
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| Published Journal Name | ACS Energy Letter | | |
| Type of Publication | Journal | | |
| Volume | 3 | Issue | 8 |
| Publisher | ACS | | |
| Publication Date | July 20, 2018 | | |
| ISSN | 23808195 | | |
| DOI | https://doi.org/10.1021/acsenergylett.8b01105 | | |
| URL | [Aqueous Magnesium Zinc Hybrid Battery: An Advanced High-Voltage and High-Energy MgMn2O4 Cathode | ACS Energy Letters](https://pubs.acs.org/doi/10.1021/acsenergylett.8b01105) | | |
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| Abstract |  |
| Driven by energy demand and commercial necessities, rechargeable aqueous metal ion batteries (RAMBs) have gained increasing attention over the last few decades as high-power and high-energy hubs for large-scale and ecofriendly energy storage devices (ESDs). However, recently explored RAMBs still do not provide the performance needed in order to be realized in grid-scale storage operations due to their poor electrochemical stability, low capacity, low working voltage, and apparently low specific energies. Herein, we have fabricated a new RAMB using MgMn2O4 as the cathode and zinc as the anode for the first time. The stable electrochemical performance of this RAMB at high current rates (∼80% capacity retention at 500 mA g–1 after 500 cycles) and a very high specific energy of 370 Wh kg–1 at a specific power of 70 W kg–1 make this newcomer to the family of RAMBs a serious contender for the exploration of safe and green ESDs in the near future. | |