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(54) **ELECTRODE MATERIALS FOR RECHARGEABLE ZINC CELLS AND BATTERIES PRODUCED THEREFROM**

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(2013.01)

(71) Applicant: **UNIVERSITY OF WATERLOO**,  
Waterloo (CA)

(72) Inventors: **Brian D. ADAMS**, Mitchell (CA);  
**Dipan KUNDU**, Kitchener (CA);  
**Linda F. NAZAR**, Waterloo (CA)

(21) Appl. No.: **15/513,914**

(57)

**ABSTRACT**

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The present disclosure discloses a rechargeable Zn battery based on layered/tunnelled structure vanadium/molybdenum oxides, with/without the presence of neutral/cationic/anionic species and/or water molecules inserted into the interlayers/tunnels, of nano/microparticle morphology as robust materials for high rate and long term reversible Zn<sup>2+</sup> ion intercalation storage at the positive electrode, that are coupled with a metallic Zn negative electrode, and an aqueous electrolyte. The positive electrode may include electronically conducting additives and one or more binders along with the Zn<sup>2+</sup> intercalation material; the negative electrode is Zn metal in any form; the aqueous electrolyte is of pH 1 to 9 and contains a soluble zinc salt in a concentration range from 0.01 to 10 molar.

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§ 371 (c)(1),

(2) Date: **Mar. 23, 2017**

**Related U.S. Application Data**

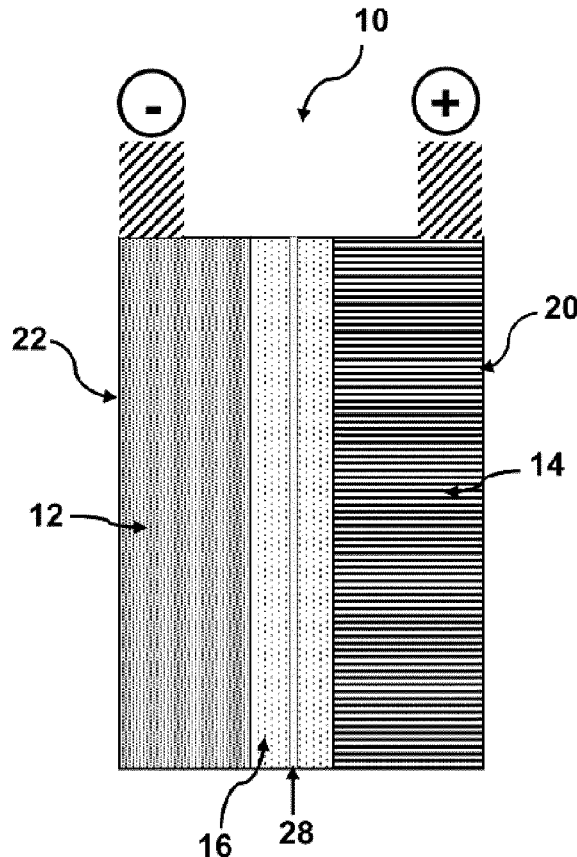
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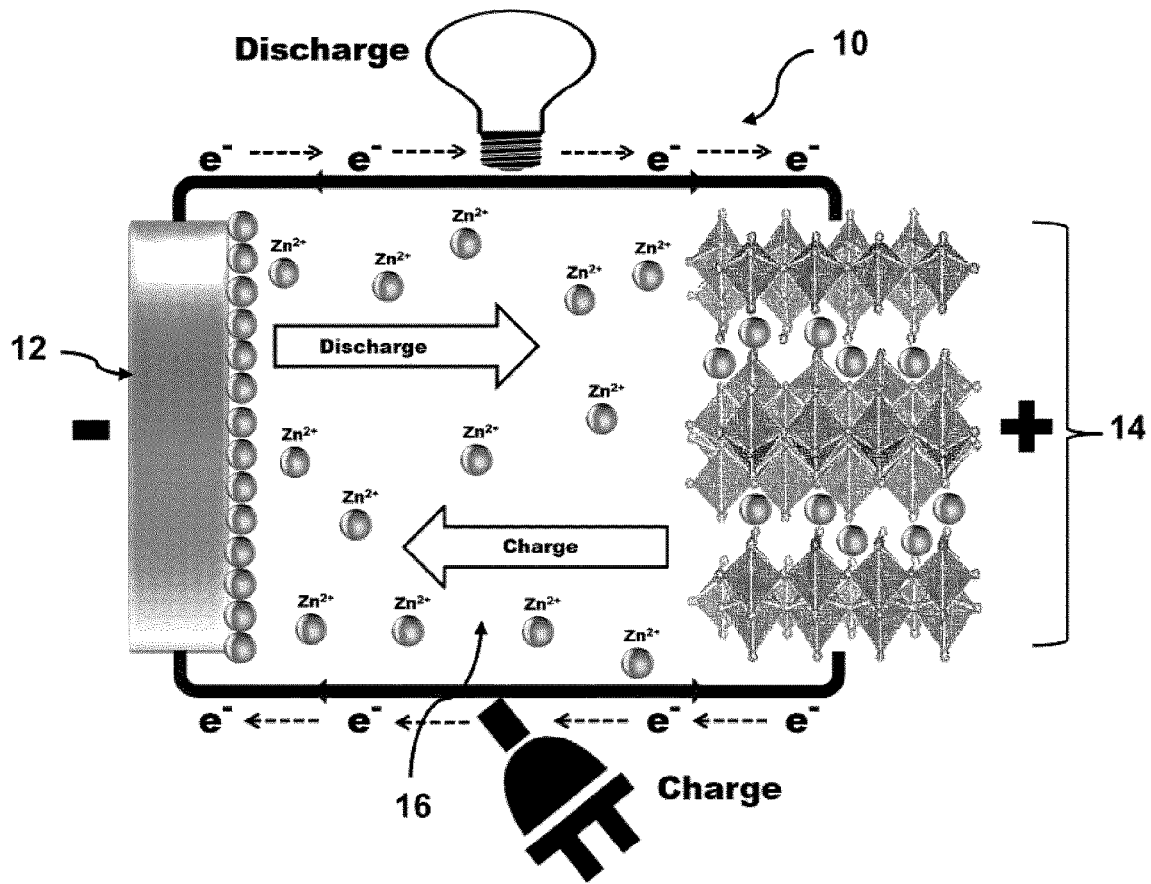


Figure 1A

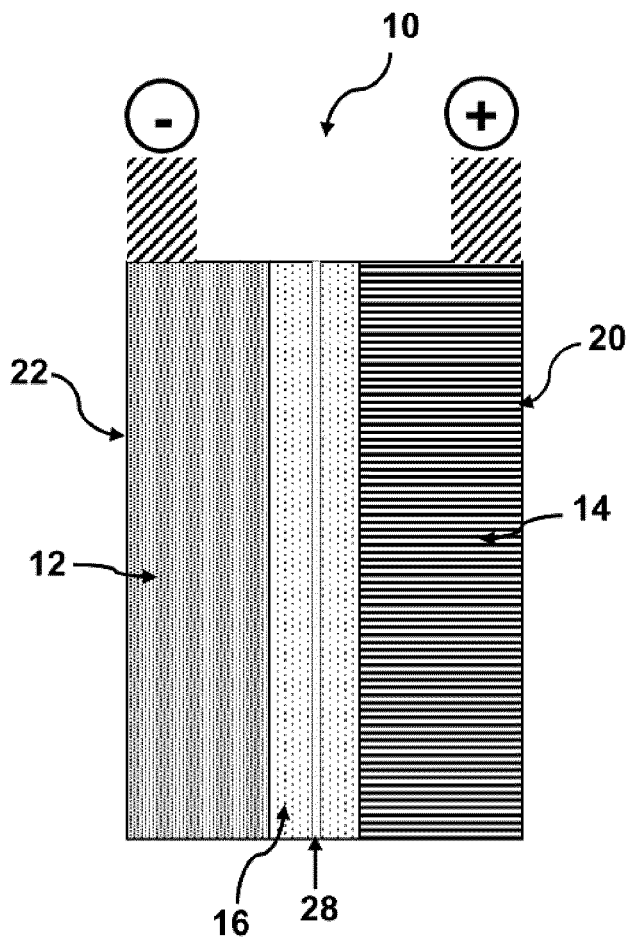


Figure 1B

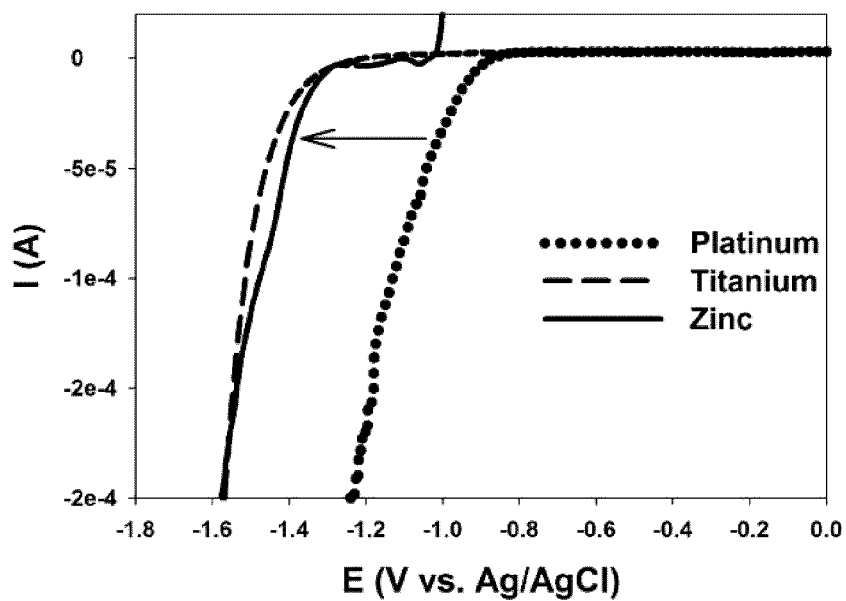


Figure 2

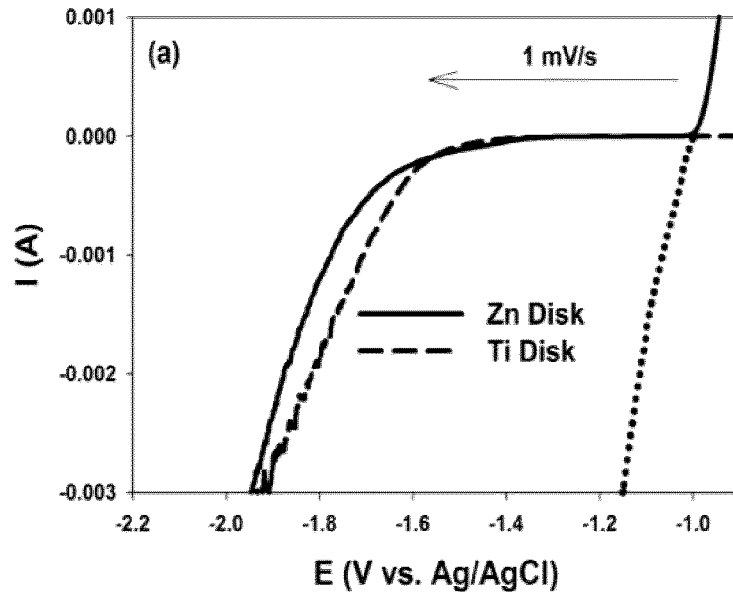


Figure 3A

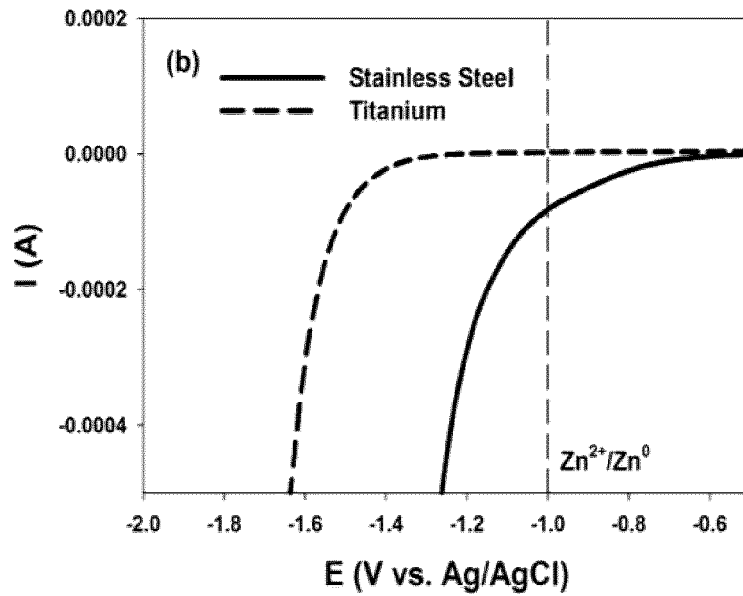


Figure 3B

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