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Text of the abstract

The present invention provides an aqueous electrolyte for use in rechargeable zinc-halide storage batteries that possesses improved stability and durability and improves zinc-halide battery performance. One aspect of the present invention provides an electrolyte for use in a bipolar, static, secondary zinc bromine electrochemical cell comprising from 25 wt% to 70 wt% of ZnBr_2 ; from 5 wt% to 50 wt% of water; from 0.5 wt% to 10 wt% of a glyme; and one or more quaternary ammonium agents, wherein the electrolyte comprises from about 0.5 wt% to about 10 wt% of the one or more quaternary ammonium agents.