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(54) **MICRO ELECTROCHEMICAL ENERGY STORAGE CELLS**

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 429/231.1; 29/623.1

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(57) **ABSTRACT**

Thin-film micro-electrochemical energy storage cells (MEESC) such as microbatteries and double-layer capacitors (DLC) are provided. The MEESC comprises two thin layer electrodes, an intermediate thin layer of a solid electrolyte and optionally, a fourth thin current collector layer; said layers being deposited in sequence on a surface of a substrate. The MEESC is characterized in that the substrate is provided with a plurality of through cavities of arbitrary shape, with high aspect ratio. By using the substrate volume, an increase in the total electrode area per volume is accomplished.

14 Claims, 2 Drawing Sheets



