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(54) **SELF ASSEMBLED MULTI-LAYER NANOCOMPOSITE OF GRAPHENE AND METAL OXIDE MATERIALS**

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H01M 4/525	(2010.01)
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H01M 4/505	(2010.01)
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USPC **429/209**; 429/122; 423/448; 29/592

(58) **Field of Classification Search**

USPC 429/209, 122; 423/448; 29/592

See application file for complete search history.

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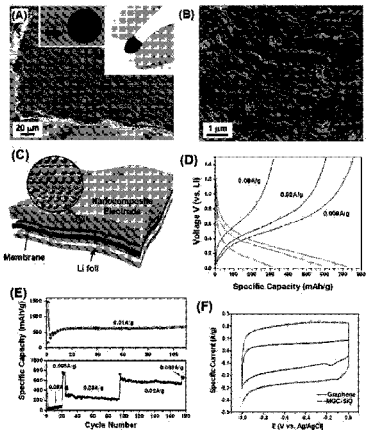
(57) **ABSTRACT**

Nanocomposite materials having at least two layers, each layer consisting of one metal oxide bonded to at least one graphene layer were developed. The nanocomposite materials will typically have many alternating layers of metal oxides and graphene layers, bonded in a sandwich type construction and will be incorporated into an electrochemical or energy storage device.

14 Claims, 11 Drawing Sheets