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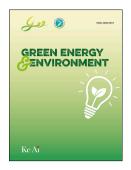
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#### ACCEPTED MANUSCRIPT

 $SnS_2$  nanosheets arrays sandwiched by N-doped carbon and  $TiO_2$  for high-performance Na-ion storage

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#### **Abstract**

In this paper,  $SnS_2$  nanosheets arrays sandwiched by porous N-doped carbon and  $TiO_2$  ( $TiO_2@SnS_2@N-C$ ) on flexible carbon cloth are prepared and tested as a free-standing anode for high-performance sodium ion batteries. The as-obtained  $TiO_2@SnS_2@N-C$  composite delivers a remarkable capacity performance (840 mA h g<sup>-1</sup> at a current density of 200 mA g<sup>-1</sup>), excellent rate capability and long-cycling life stability (293 mA h g<sup>-1</sup> at 1 A g<sup>-1</sup> after 600 cycles). The excellent electrochemical performance can be attributed to the synergistic effect of each component of the unique hybrid structure, in which the  $SnS_2$  nanosheets with open framworks offer high capacity, while the porous N-doped carbon nanoplates arrays on flexible carbon cloth are able to improve the conductivity and the  $TiO_2$  passivation layer can keep the structure integrity of  $SnS_2$  nanosheets.

**Keywords:** Sandwich structure; SnS<sub>2</sub> nanosheets; N-doped carbon; TiO<sub>2</sub>; sodium-ion battery

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