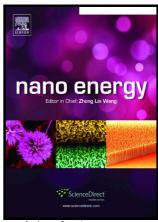
## Author's Accepted Manuscript

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## **ACCEPTED MANUSCRIPT**

## Carbon-Coated Hierarchical NaTi<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub> Mesoporous Microflowers with Superior **Sodium Storage Performance**

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#### Abstract

NASICON structured NaTi<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub> with stable and open framework has become a promising electrode material for sodium-ion batteries. However, the intrinsic low electronic conductivity of NaTi<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub> leads to inferior rate capability and poor active material utilization. Herein, we first report the synthesis of carbon-coated hierarchical NaTi<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub> mesoporous microflowers (NTP/C-F), via a facile and controllable solvothermal method and subsequent annealing treatment. The unique structural features endow the NTP/C-F with excellent structural stability, enhanced charge transfer kinetics, and suppressed polarization. This architecture exhibits superior sodium storage performance: high initial capacity (125 mA h g<sup>-1</sup> at 1 C), outstanding rate capability (95 mA h g<sup>-1</sup> at 100 C), and ultra-long cycling stability (capacity retention of 77.3% after 10, 000 cycles at 20 C). Time-resolved in-situ X-ray diffraction study reveals the typical

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