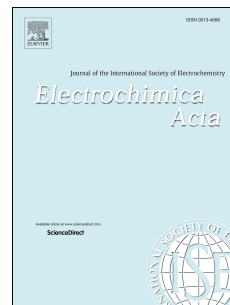


Accepted Manuscript

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PII: S0013-4686(18)31294-5

DOI: [10.1016/j.electacta.2018.06.007](https://doi.org/10.1016/j.electacta.2018.06.007)

Reference: EA 32000

To appear in: *Electrochimica Acta*

Received Date: 23 March 2018

Revised Date: 22 May 2018

Accepted Date: 1 June 2018

Please cite this article as: Z. Yu, Z. Cheng, G. Tsekouras, X. Wang, X. Kong, M. Osada, S.X. Dou, High areal capacitance and rate capability using filled Ni foam current collector, *Electrochimica Acta* (2018), doi: 10.1016/j.electacta.2018.06.007.

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High areal capacitance and rate capability using filled Ni foam current collector

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Abstract: A novel approach to achieving high areal capacitance and rate capability is demonstrated, whereby an active material is loaded onto a high surface area, filled Ni foam current collector. Micro/nano Ni-filled Ni foam (MNFNF) current collector was fabricated by initially filling commercial Ni foam with Ni slurry and sintering to yield micro Ni-filled Ni foam, followed by electrochemical deposition of nano Ni. This current collector has a greatly enhanced surface area compared to Ni foam, allowing for high mass loading of active

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