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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