Fabrication of Ni(OH)(2) coated ZnO array for high-rate pseudocapacitive energy storage

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Abstract

The present communication reports on the first electrodeposition of Ni(OH)(2) on ZnO array supported on Ni foam. When applied as a binder-free electrode material for pseudocapacitive energy storage, the resulting ZnO@Ni(OH)(2) array exhibits a high specific capacitance of 2028 Fg(-1) at a current density of 10 A g(-1) with good cycling stability. Meanwhile, the array exhibits a superb rate capability. Even at an extremely high current density of 100 A g(-1), the array still shows a very high specific capacitance of 1059 F g(-1). (C) 2013 Elsevier Ltd. All rights reserved.

Keywords

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