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Editorial

Supercapacitors

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Reviews

Recent progress and perspectives of metal oxides based on-chip microsupercapacitors

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Tingting Huang[a,b], Kai Jiang[c], Di Chen[a], Guozhen Shen[b]

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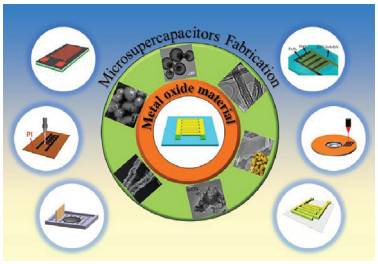
Recent progress on metal oxide nanostructures based on-chip microsupercapacitors was summarized.



Recent progress of unconventional and multifunctional integrated supercapacitors

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Mengxue Chen[b], Yun Yang[b], Dezhi Chen[a], Hua Wang[b]

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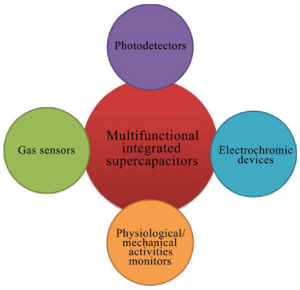
We summary the latest works of multifunctional integrated supercapacitors which were combined with photodetectors, gas sensors, electrochromic or physiological/mechanical activities monitors.



doi:10.1016/S1001-8417(18)30087-1

Communications

Hollow Co_9S_8 from metal organic framework supported on rGO as electrode material for highly stable supercapacitors

Peng Wang[a,b], Chunyang Li[b], Weigang Wang[b], Jing Wang[b], Yusong Zhu[b], Yuping Wu[a,b]

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We demonstrate a hydrothermal method to fabricate a composite of reduced graphene oxide (rGO) with hollow Co_9S_8 derived from metal organic framework (MOF), which exhibits a high specific capacitance of 575.9 F/g at 2 A/g and 92.0% capacitance retention after 9000 cycles.

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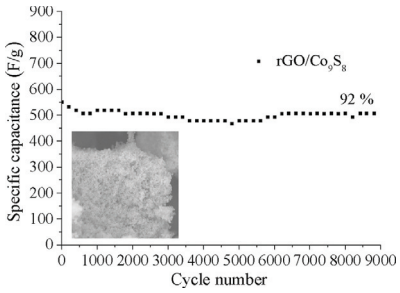

Flexible asymmetric supercapacitor based on MnO_2 honeycomb structure

Yuling Chen[a], Chao Chen[b], Ruitao Lv[b], Wanci Shen[b], Feiyu Kang[b], Nyanhwa Tai[c], Zhenghong Huang[a,b]

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By controlling the electroplating time of solution containing $Mn(Ac)_2$, the MnO_2 nanosheets were self-assembled to the honeycomb structure and showed an excellent electrochemical performance in 1 mol/L Na_2SO_4 electrolyte. *Via* pairing with activated carbon as negative electrode, the capacitor could deliver a maximum energy density of 43.84 Wh/kg and a maximum power density of 6.62 kW/kg.

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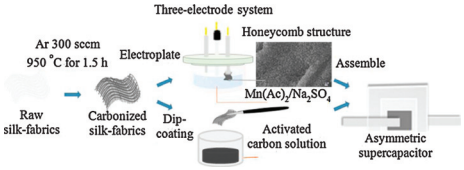

Mesoporous carbon material as cathode for high performance lithium-ion capacitor

Jin Zhang[a], Jing Wang[a], Zhiqiang Shi[a], Zhiwei Xu[b]

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The mesoporous carbon material with large pore volume and high surface area by a simple *situ* MgO template method is synthesized, which is utilized as cathode to assemble a high performance lithium ion capacitor.

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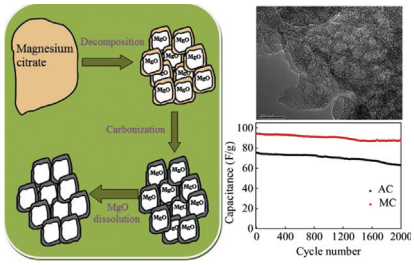

Boron and nitrogen dual-doped carbon as a novel cathode for high performance hybrid ion capacitors

Jiangmin Jiang, Ping Nie, Shan Fang, Yadi Zhang, Yufeng An, Ruirui Fu, Hui Dou, Xiaogang Zhang

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A high performance hybrid ion capacitors has been developed by using B, N dual-doped 3D superstructure carbon cathode and prelithiated graphite anode.

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