

Nov 30, 2023 ? Graphene-based composite features superior energy storage and electrochemical performance. ? The Graphene material with promising advanced super ?

Apr 18, 2025 This work constructs a near-ideal micro electrochemical supercapacitor, featuring the monolayer graphene as a working electrode, to reveal the ceiling of electrochemical ?

Nov 13, 2024 The reduced surface area causes a reduction in capacitance as well, which is consistent with the SEM images revealing blocked graphene pores. The results obtained also ?

May 1, 2022 Nowadays, the energy storage systems based on lithium-ion batteries, fuel cells (FCs) and super capacitors (SCs) are playing a key role in several app?

Jul 1, 2024 This review focuses on the advancements in, and potential of graphene-based planar micro-supercapacitors (G-MSCs) fabricated through laser patterning. This study provides a ?

Jul 7, 2023 A similar but more limited study in 2020 compared graphene and activated carbon to show that the specific capacitance of graphene-based supercapacitors was markedly lower ?

Apr 30, 2019 1. Introduction Planar micro supercapacitors (SCs), as a new emerging branch of electrochemical capacitors, could enable the entire device to be much thinner and flexible, ?

Apr 13, 2011 Here, we report an “in-plane” fabrication approach for ultrathin supercapacitors based on electrodes comprised of pristine graphene and multilayer reduced graphene oxide. ?

Mar 1, 2016 The graphene-based materials are promising for applications in supercapacitors and other energy storage devices due to the intriguing properties, i.e., highly tunable surface area, ?

Mar 30, 2023 Here, we demonstrate a versatile printable technology to fabricate arbitrary-shaped, printable graphene-based planar sandwich super-capacitors based on the layer ?

Mar 14, 2024 By judicious control of gap size between neighboring interdigitated electrodes and mass loading of graphene, we achieve a high areal capacitance ($1336 \pm 181 \text{ F cm}^{-2}$) with reliable ?

May 24, 2024 Thin-film based micro-supercapacitors (TF-MSCs) have generated an increasing interest

owing to their suitability for integration as energy storage devices in the flexible and ?

Apr 7, 2024 Graphene supercapacitors Graphene is a thin layer of pure carbon, tightly packed and bonded together in a hexagonal honeycomb lattice. It is widely regarded as a "wonder ?

Jan 1, 2020 Graphene (GR) resembles as a planar sheet having thickness equivalent to almost one atom of carbon in which carbon atoms are closely packed representing a honeycomb ?

Jan 13, 2020 Facile production of graphene-based in-plane interdigital electrode is critical for microscale supercapacitors but remains a great challenge (time consuming, expensive ?

In this case the capacitance retention was up to 83% after 15 000 cycles. In some studies, ternary composites have been explored as well, 84,85 where graphene foam is paired with two ?

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