

The authors present a core-shell fiber moisture-driven electric generator by a synergetic complex coacervation and built-in potential strategy, enabling self-powered human interactive sensors...

In this study, we aim to evaluate and compare the thermoelectric performance of three distinct concrete configurations systematically: fly ash-plain reinforced concrete, fly ash-bamboo fiber ...

Triboelectric nanogenerators (TENGs) have garnered significant attention as a promising energy harvesting technology, capable of converting mechanical energy into electrical energy with high ...

In this study, a multifunctional, hierarchically modified glass fiber-reinforced polymer composite laminate (GFRP) capable of harvesting thermoelectric energy is fabricated and demonstrated.

These devices have become a focus of interest due to their capacity to effectively transform kinetic energy into electrical power via combined triboelectrification and electrostatic ...

Experimental results demonstrated that TENG on carbon fiber reinforced polymer plate (TENG-CFRP) incorporating polypropylene (PP) balls ...

In this study, a piezoelectric composite was fabricated by laminating carbon fiber-reinforced polymer (CFRP) onto a potassium sodium niobate - epoxy (KNN - epoxy) layer. The ...

Experimental results demonstrated that TENG on carbon fiber reinforced polymer plate (TENG-CFRP) incorporating polypropylene (PP) balls exhibited significantly enhanced electrical ...

By bridging foundational material science with innovative applications, this review seeks to inspire the development of high-performance, self-powered electrospun composite tribovoltaic ...

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This essay explores the exciting field of fiber-based piezoelectric generators, which leverage the flexibility and ubiquity of fibers to create new avenues for powering portable electronics, wearable ...

These devices have become a focus of interest due to their capacity to effectively transform kinetic energy into electrical power via combined ...

In this paper, we demonstrate a novel, lightweight, and designable anisotropic stiffness triboelectric nanogenerator (TENG) and displacement sensor. The triboelectric pairs consist of the carbon fiber ...

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