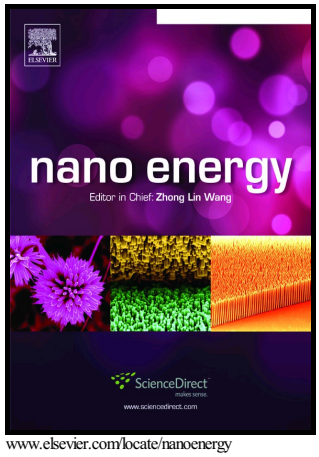

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Abstract

Triboelectric nanogenerator (TENG) is an effective way to convert mechanical energy into electricity, which has been approved as new types of energy harvesting and strain sensor technology. In this study, we design and fabricate a flexible and transparent TENG based on a nanocomposite film made of PVDF and titania monolayer (TOML). The PVDF/TOML composite TENG with 1.5 wt% TOML generates output signals of 52.8 V and 5.69 μA/cm^2 and a 50-fold enhancement in output power, compared to the pure PVDF-based TENG. It is found that the synergy between efficient electron capture and high dielectric constant of TOML leads to enhancing the performance of the TENG. Besides, the nanocomposite maintains high performance of the stability

[1] R.M. Wen and J.M. Guo contributed equal