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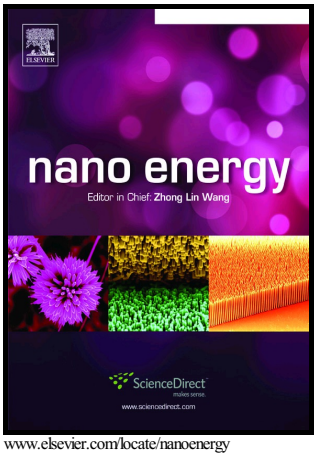

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A Structural Bionic Design: From Electric Organs to Systematic Triboelectric Generators

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Abstract

Bioelectricity and triboelectrification are well-known and widely existing phenomena in nature, and the investigation of their mechanisms and utilizations has attracted much attention for a long time. As traditional investigations suggested, the mechanism of electric organs is that the electrocytes are lined up so a current of ions can flow through them, and thus they are stacked in a sequence so that each one adds up to form a potential difference. For varieties of triboelectric generators, most of them feature extremely high voltage but limited current, which is the major challenge to pracitcal utilization. Here, we present a structural bionic design based on the microstructure of electric organs to improve the output current of

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