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# Near-Infrared Irradiation Induced Remote and Efficient Self-Healable Triboelectric Nanogenerator for Potential Implantable Electronics

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## **ABSTRACT**

The rapid advancement of implantable electronics makes exploring a novel power source urgent. Self-healable triboelectric nanogenerator (SH-TENG) is an emerging and promising candidate based on the combination of triboelectric effect, electrostatic induction and self-healing action. In this work, we present a novel near-infrared (NIR) irradiation induced SH-TENG as potential implantable power source. With well-defined three-layer structure, the PDMS acts as triboelectric layer, epoxy resin-based polysulfide elastomer as healing-assisting layer, and SH/CNTs as self-healable electrostatic induction electrode layer, respectively. Due to the remotely-induced dynamic disulfide exchange reaction stimulated by NIR irradiation,

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