Triboelectric Nanogenerators (TENG)

- From Nanoenergy to Macro-Energy

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Triboelectric nanogenerator (TENG) was invented by Wang's group in 2012, which is based on the coupling of triboelectrification and electrostatic induction effects for converting mechanical energy into electric power. TENG is playing a vitally important role in the distributed energy and self-powered systems, with applications in internet of things, AL, environmental/infrastructural monitoring, medical science, environmental science, and security. TENG is most effective for utilization of high-entropy energy, which is the random, low-density, low-grade mechanical energy widely-distributed in our living environment and in nature. There are now over 22,000 authors distributed in 100 countries and regions around the globe who have published papers on TENG, and more than 14,000 papers have been published in the field. This presentation will first focus on the advances in fundamental science made due to the discovery of TENG. Then we will focus on the potential industrial impacts that have been made by TENG. We will show how this new field will benefit to the sustainable development of humankinds.

References:

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