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PII: S2211-2855(18)30376-8  
DOI: <https://doi.org/10.1016/j.nanoen.2018.05.061>  
Reference: NANOEN2769

To appear in: *Nano Energy*

Received date: 15 April 2018  
Revised date: 15 May 2018  
Accepted date: 23 May 2018

Cite this article as: Xiao Xiao Zhu, Ze Bin Li, Xiao Shi Li, Li Su, Xiao Yan Wei, Shuang Yang Kuang, Bing Wu Su, Jin Yang, Zhong Lin Wang and Guang Zhu, Triboelectrification-Enabled Thin-Film Tactile Matrix for Self-Powered High-Resolution Imaging, *Nano Energy*, <https://doi.org/10.1016/j.nanoen.2018.05.061>

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## Abstract

Tactile sensors have broad applications in human-machine interfacing technologies. In this work, we report a type of a thin-film-based flexible integrated triboelectric sensing matrix (ITESM) that is of high resolution and large area. It has a total of 3,600 sensing units and a resolution of 50 dots per inch (dpi), which are 14 times and 25 times of the state-of-the-art works on the triboelectric sensor array, respectively. When touched by an external object, the ITESM generates a voltage signal in its bit electrode lines and word electrode lines due to the combination of triboelectrification and electrostatic induction. With the assistance of a signal processing circuit that

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