

# Guest Lecture

## The science of contact-electrification and the technology of triboelectric nanogenerators

### Zhong Lin Wang

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#### Introduction

Contact electrification (or usually called “triboelectrification”) effect, the most fundamental effect for electricity, has been known for over 2600 years since ancient Greek time, but its scientific mechanism remains unclear. The study of triboelectrification is recently revived due to the invention of the triboelectric nanogenerators (TENGs) by using the coupling of triboelectrification and electrostatic induction effects, which is the most effective approach for converting mechanical energy into electricity for powering small sensors. TENG is playing a vitally important role in the distributed energy and self-powered systems, with applications in internet of things, environmental/infrastructural monitoring, medical science, environmental science and security. In this talk, we first present the physics mechanism of triboelectrification for general materials. Read more on the website [www.miun.se/fscn](http://www.miun.se/fscn)



#### Zhong Lin Wang CV

Dr. Zhong Lin Wang is the Hightower Chair in Materials Science and Engineering and Regents’ Professor at Georgia Tech and Founding Director of the Beijing Institute of Nanoenergy and Nanosystems. Dr. Wang pioneered the nanogenerators from fundamental science to technological applications. His research on self-powered nanosystems has inspired the worldwide effort in academia and industry for studying energy for micro-nano-systems. He coined and pioneered the fields of piezotronics and piezo-phototronics for the third generation semiconductors. Wang is ranked No. 1 in Google Scholar public profiles in Nanotechnology & Nanoscience both in total citations and h-index impacts. He is ranked #15 among 100,000 scientists across all fields worldwide. His google scholar citation is over 220,000 with an h-index of over 234. Read more on the website [www.miun.se/fscn](http://www.miun.se/fscn)

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**Place** Campus Sundsvall

**Welcome!**