



Invited speaker's information form of IUMRS-ICA2017

Presentation on Symposium of “**smart materials (D7)**”

	<p>Presentation title: Assistant Professor</p> <p>Speaker's name and affiliation: Yannan Xie, Xiamen University</p> <p>City/ Country: Xiamen/China</p> <p>Email: yannanxie@xmu.edu.cn</p>
<p>Brief biography of Speaker:</p> <p>Yannan Xie received his Ph.D. degree from Xiamen University in 2014. He is currently an assistant professor and deputy director of the institute for energy efficiency engineering in the college of energy at Xiamen University. His research interests focus on micro/nanoenergy, self-powered sensor, self-charging energy system, semiconductor nanomaterials, semiconductor optoelectronic device. He has published 30 peer-reviewed papers in the journal of Advanced Materials, ACS Nano, NanoEnergy, Nature Communications, Nano Letters, etc.</p>	
<p>Abstract:</p> <p>Title: High-Efficiency Freestanding Triboelectric-Layer Nanogenerator for Harvesting Mechanical Energy</p> <p>Targeted at universally-existing mechanical motions, the triboelectric nanogenerator (TENG), based on the conjunction of contact electrification and electrostatic induction, has been recognized as one of the most promising approaches. Nevertheless, most of the existing TENGs necessitate the attachment of electrodes and lead wires onto moving triboelectric layers, which largely limits the versatile applications of TENGs. Freestanding triboelectric-layer nanogenerator (FTENG) can solve the above issues. In such structure, one electrode-free triboelectric layer alternatively approaches two stationary electrodes by sliding motion, resulting in the flow of free electrons across the external load as driven by the periodical change of induced potential difference. Through introducing finer grating segments, the electricity output and energy efficiency of the FTENG can be largely enhanced and used for widely harvesting mechanical energy in our environment, such as people walking and vehicle vibration.</p>	

Please fill the above form and send it to the Symposium organizer rcwang@nuk.edu.tw.