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## Hightower Chair in Materials Science and Engineering and Regents' Professor at Georgia Institute of Technology Prof Zhong Lin Wang Speaks on Nanogenerators for Self-powered Systems and Piezotronics for Smart Devices at HKUST 25th Anniversary Distinguished Speakers Series

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The Hong Kong University of Science and Technology (HKUST) hosted the 25th Anniversary Distinguished Speakers Series yesterday, featuring Prof Zhong Lin Wang, Hightower Chair in Materials Science and Engineering and Regents' Professor at Georgia Institute of Technology, and Chief Scientist and Director at Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences. The event was well received by students, faculty members and guests from HKUST.

Speaking on "Nanogenerators for Self-powered Systems and Piezotronics for Smart Devices", Prof Wang reflected on how he began his research, he said, "Everything made by human was driven by electricity. And I asked myself: can we use human mechano-sensation to drive power of electronic devices instead? Can we control electronics by imagination? I see a possibility."

Prof Wang talked about the updated progress in nanogenerators which have been developed based on piezoelectric, triboelectric and pyroelectric effects, aiming at building self-sufficient power sources for micro- or nano-systems. He said that the output of the nanogenerators now is high enough to drive a wireless sensor system and charge a battery for a cell phone, and they are becoming a vital technology for sustainable, independent and maintenance-free operation of micro- or nano-systems and mobile or portable electronics.

Nanogenerator, for Prof Wang, is a revolutionary technology. "I see many applications of the technology, more important, none of the materials involved are expensive. That means nanogenerators will be very affordable, and will be very easy to scale up and adapted." He said. "The nanogenerators technology is now not only capable of driving portable electronics, but also has the potential for harvesting wind and ocean wave energy for large-scale power application." At the talk, he also focused on the updated progress in the field of piezotronics.

A renowned physicist specialized in nanotechnology, Prof Wang was elected as a foreign member of the Chinese Academy of Sciences in 2009, member of European Academy of Sciences in 2002, fellow of American Physical Society in 2005, fellow of AAAS in 2006, fellow of Materials Research Society in 2008, fellow of Microscopy Society of America in 2010, fellow of Royal Society of Chemistry, and fellow of the World Innovation Foundation in 2002. He received 2015 Thomson Reuters Citation Laureates award.

Prof Wang is among distinguished speakers including Nobel Prize winners, corporate leaders, entrepreneurs and key financial policy shapers invited to speak at the HKUST 25th Anniversary Distinguished Speakers Series. Other confirmed speakers include Dr Raghuram Govind Rajan, Governor of the Reserve Bank of India. Prof Steven Chu, Nobel Laureate in Physics in 1997 and former US Secretary of Energy, was invited as the inaugural speaker of the series. Other speakers include Mr Jean-Pascal Tricoire, Chairman and Chief Executive Officer of Schneider Electric; Mr Wang Shi, Founder and Chairman of China Vanke; Prof Dan Shechtman, Nobel Laureate in Chemistry in 2011. More talks are also being lined up.

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*Prof Zhong Lin Wang talks about "Nanogenerators for Self-powered Systems and Piezotronics for Smart Devices" at HKUST 25th Anniversary Distinguished Speakers Series.*



*Executive Vice-President and Provost Prof Wei Shyy (left) presents HKUST 25th Anniversary souvenirs to Prof Zhong Lin Wang.*