

For release
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MAINLAND SUPPORT FOR SMART FLUIDS RESEARCH

Dr Weijia Wen, Assistant Professor in the Physics Department at the Hong Kong University of Science and Technology (HKUST), was recently awarded RMB 400,000 for his research on electro-rheological (ER) fluids by the prestigious National Natural Science Foundation (NNSF), the top research funding organization on the Chinese Mainland.

Dr Wen is the only scientist from Hong Kong to have received the NNSF's Overseas Young Scholar Collaboration Research Grant 2000 in physics. His project was selected after a highly rigorous process that involved a three-stage review by panels of experts in the fields of astronomy, geography, mathematics and physics.

In addition to the initial NNSF grant, Dr Wen has also received RMB 500,000 in funding from the Chinese Academy of Sciences (CAS) and its Institute of Physics.

"This is indeed a great honor for me and real recognition of my research. I'll work on the practical applications of ER technology, and their translation into commercially viable products," said Dr Wen.

Dr Wen's project focuses on ER fluids – also called smart fluids – which are dispersions of dielectric particles in an insulating oil whose rheological properties can be reversed in response to an electric field. The field-controlled rheological properties of ER fluids have major potential in automotive, industrial and aircraft/aerospace applications. They can be used in devices such as dampers, shock absorbers, brakes, clutches, valves, and position and speed controllers as well as in virtual reality systems.

Dr Wen joined HKUST in 1995 after receiving his PhD from the Chinese Academy of Sciences. From 1997 to 1999, he pursued post-doctoral research at UCLA. An expert in soft condensed matter physics, Dr Wen has authored more than 20 articles in leading academic journals such as *Physical Review Letters*, *Applied Physics Letters* and *Physical Review E*.

For media enquiries only:

Jacky Tsang
Tel: 2358-6306
email: patsang@ust.hk

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