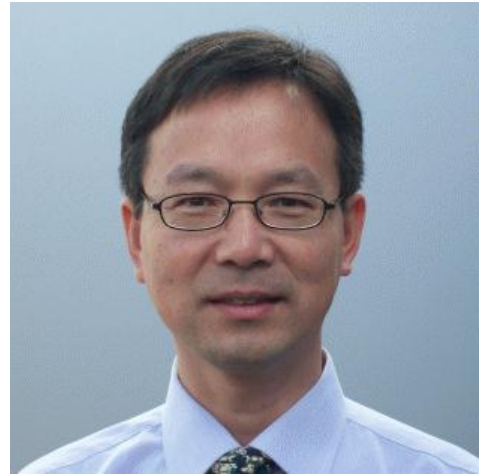


学术交流报告

报告内容:

Electrical Conductive Materials templated from elastic rubber platforms

Highly stretchable and conductive three-dimensional (3D) micro-wrinkled reduced graphene oxide (MWrGO) film was fabricated using a novel thermo-mechanical shrinking method from elastic rubber materials. This 3D rGO architecture not only increases the specific area for more electrons to pass through but also bestows stretchability to the conductive pathway. The structural change of micro-wrinkles during the deformation had been monitored by an in-situ straining microscopy. The electrical conductivity of the samples remained fairly stable and stayed above 25 S/cm under low deformation (no more than 30 % strain) for up to 500 mechanical stretching-release cycles. The isotropic MWrGO/PDMS composite can be stretched bi-axially. This MWrGO based stretchable composite with stable electrical properties and long life span could form a new platform for stretchable electronics.



报告人介绍:

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2011 - present: Professor, Centre for Material and Fibre Innovation, Deakin University
2007 - 2010: Associate Professor, Centre for Material and Fibre Innovation, Deakin University

Prof Kong has a broad research interest in micro and nanofabrications and systems. His key interests include: micro and nanosystems using microfluidics and nanofluidics for biomedical and environmental applications; and micro and nano characterization. He attracted more than \$5 million funds from National Competitive Grants schemes. He was awarded an early career researcher from ARC and AAS in 2003 and a Roger Pysden Memorial Fellowship from Australian Business Limited in 2002, and an Australia Award - Endeavour Executive Awards in 2010. His innovative PCRDisc device has won a gold medal from ITEX2009, an iENA Special Award for Best Invention and iENA gold medal, and a JIPA Award for the Best Invention in Biotechnology.

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