Dr. Yanzhe Wu

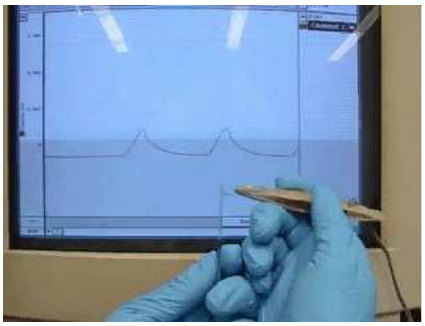
Qualifications:
PhD Chemisty UoW, Australia
MSc ICT, UoW, Australia
BSc Biochemistry, UoA, China


Dr Yanzhe (Richard) Wu

Research interests:
Artificial muscles using inherently conducting polymers – exploiting the combined advantages of the convenience of electrical energy input, control and the wet and soft nature of inherently conducting polymers

Mechanical sensors using inherently conducting polymers – investigating their novel signal-generation mechanism and appropriate applications

BIOTXT project -- the integration of biochemical sensors into wearables and the development of microfluidic devices, which aims at developing at developing dedicated biochemical-sensing techniques to monitor body fluids via sensors distributed on a textile substrate. The textile itself becomes the sensor and can be integrated into suitable apparel. This is challenging but it provides numerous health benefits by allowing remote monitoring of vitals signs and early diagnosis of illness or metabolic disorders. The initial work is to develop a textile based colorimetric sensor to monitor the pH of sweat.


Mechanical Sensor

Affiliations:
Postdoctoral fellow, Adaptive Information Cluster, Dublin City University, Ireland

Memberships:
RACI member

Publications:
Wu, Y.; Alici, G.; Spinks, G. M.; Wallace, G. G., Fast trilayer polypyrrole bending actuators for high speed applications. *Synthetic Metals, 2006, 156, 1017-22*

*Wu, Y., K. Lau, G. Spinks, D. Diamond, G.G. Wallace, I*nherently Conducting Polymers for Microfluidics*, The International Conference on Science and Technology of Synthetic Metals, Ireland, 2006*

Wu, Y., D. Zhou, G.M. Spinks, P.C. Innis, and G.G. Wallace, TITAN: A Conducting Polymer Based

Artificial Muscle actuator

Microfluidic Pump. *Smart Marterials and Structures*, *(2005), 14(6), 1511-16*

Wu, Y., S.E. Moulton, C.O. Too, G.G. Wallace, and D. Zhou, Use of Inherently Conducting Polymers and Pulsed Amperometry in Flow Injection Analysis to Detect Oligonucleotides. *Analyst, 2004. 129: p. 585-588*

Wu, Y., D. Zhou, G.G. Wallace, G.M. Spinks, R. Cowan, and C. Newbold. Polypyrrole/PVDF Laminates as Mechanical Sensors. *26th Australasian Polymer Symposium, 2003*

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