Zijian Zheng[a]

[a] *Institute of Textiles and Clothing, The Hong Kong Polytechnic University, Hong Kong SAR, China, Email: tczzheng@polyu.edu.hk.*

Wearable electronics is foreseen to be the next major technology after smart phone in the near future. However, most conventional electronic devices are rigid, bulky, and heavy, making them difficult to wear. On the other hand, fibres are materials that have been worn by human beings for more than a thousand years. Fibres are flexible, lightweight, conformal, and highly manufacture-able. This talk will introduce how our research group makes use of fibre for wearable electronics. These fibre-based electronic devices can function as high-performance electronics while maintaining the flexibility, lightweight, permeability, processibility, and even washing ability like textiles. In addition, we also show that fibre-based device can significant improve the electrochemical properties of the devices.

[1] Q. Huang, D. Wang, Z. J. Zheng*, Adv. Energy Mater. 2016, DOI:

[2] L. Liu, Y. Yu, C. Yan, K. Li, Z. J. Zheng*, Nat. Commun. 2015, 6, 7260.
[3] Y. Yu, C. Yan, Z. J. Zheng*, Adv. Mater. 2014, 26, 5508-5516.
[4] Y. Yang, Q. Huang, L. Niu, D. Wang, C. Yan, Y. She, Z. J. Zheng*, Adv. Mater. 2017, 1606679

Short BIOGRAPHY

Personal Information.

and Clothing (ITC) at The Hong Kong boytechnic University. His

polymer science, and bendable/stretchable/wearable/graphene materials

Sciences of Hong Kong.