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Research Supports Sport Development in Hong Kong

Hong Kong athletics gave exceptional performances at the London 2012 Olympics. Talent, hard work, and persistence of our athletics and coaches are of paramount importance, however in modern sporting competition, science and technology also played vital roles.

High-performance Sportswear is one of HKRITA's ground-breaking projects that demonstrate the importance of how Hong Kong science and technology support local sports development. This project, in different phases, is led by Prof Yi Li of the Institute of Textiles and Clothing at The Hong Kong Polytechnic University. The focus of the ongoing project is a comprehensive study of various fabric functionalities. Fabrics with appropriate moisture and thermal functions were applied to different parts of the garment to manage sweat and control body temperature. Fabrics with special mechanical functions were also designed into specific garment components to achieve appropriate tension and compression to enhance explosive muscular power in action. On the basis of the numerous wind tunnel tests and analysis of air flow patterns in different sports, fabrics were designed into different locations of the garments in order to achieve the best reduction of air resistance.

With sustained funding support from the Innovation and Technology Commission of the Government of HKSAR since 2008, the research project is able to address the needs of athletes in sporting events such as rowing, cycling, windsurfing and running. The research team has developed a novel "human biofunctional body mapping clothing design" technology on the basis of a series of patents developed by them over the years. The technology has been applied to the design and fabrication of running wear and cycling wear. HKRITA has successfully transferred the technology to enterprises in Hong Kong for industrial application and for the support of our local elite athletes.

An exhibition of "The Brilliance of Olympic and Sportswear Innovation" is now displaying the collection in The Hong Kong Polytechnic University. It is open to the public. Details are as follows:

Date: present – 20/9
Time: 9:00 – 12:30; 13:30 – 17:30 (Monday to Friday)
Venue: Fashion Resources Centre (MN109), The Hong Kong Polytechnic University
Enquiries: (852) 2627 8112



Exhibition of "The Brilliance of Olympic and Sportswear Innovation" features the sportswear collection used during training.