



香港浸會大學

HONG KONG BAPTIST UNIVERSITY

FACULTY OF SCIENCE

**Department of Physics**

**&**

**Institute of Computational and  
Theoretical Studies**

***JOINT COLLOQUIUM***

**Electronic Transport in Organic Molecular  
Films for Solar Cell Application**

BY

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Friday, November 9, 2012

11:00am – 12:00pm (Tea will be served)

T909 Science Tower, HK Baptist University

**Abstract**

Understanding electronic charge transport in semiconducting organic films is key to the development of new technologies, including solar cells and batteries. My laboratory focuses on molecular scale phenomena to establish the connection between molecular level structure and charge transport. Using oligothiophene molecules with carboxylic acid head groups we produce crystalline monolayer films by Langmuir-Blodgett techniques on Si wafers, which we characterize with atomic force microscopy with conducting tips. In this manner we can explore correlations between molecular structure and electrical transport. In the case of D5TBA, a molecule containing 5 thiophene rings, we found that electrical conductivity is anisotropic, with preferential transport along paths of highest overlap between the pi-system of the thiophene subunits along different crystallographic directions.

*All Interested Are Welcome!*