

Engineering Postdoc Fellow Openings in Optoelectronic Devices

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Project: The fundamental issues of energy crisis direct to the large amount yet increase of power consumption and the inadequacy and yet polluting nature of energy sources such as crude oil and coal. We therefore need to simultaneously reduce the power consumption and introduce green and sustainable energy sources. Organic optoelectronics are a promising candidate for addressing the two issues.

Regarding the green solar energy, the cost of the most popular silicon-based solar cells (SCs) is high. Moreover, silicon-based SCs need to be operated in good condition for 3-5 years in order to compensate the total energy used for manufacturing them. Organic semiconductor SCs (OSCs) with large absorption coefficient, simple and low cost fabrication process (e.g. the room-temperature process of ink-jet printing which can fabricate large scale OSCs) are an attractive candidate for the green energy source.

Nowadays, taking the US as an example, about 25% of electricity has been used for lighting and illustration. The consumption is expected to increase steadily with the growing of living standards. The phosphorescent organic light emitting devices (OLEDs) can approach to the theoretically 100% power efficiency and thus address the consumption issue.

The project is to enhance the quantum efficiency of organic optoelectronic devices particularly organic solar cells and then OLEDs by comprehensively investigating the optical properties and device structures specially the optical design and device physics of the device structures.

Salary: A highly competitive salary commensurate with qualifications and experience will be offered.

Period and starting date: a period of 3 years with the starting date not later than 1 March 2010.

How to apply? Please submit CV with current photo and research proposal to Dr. Wallace Choy by email.

Application deadline: As soon as possible for intermediate consideration.