香港中文大學 THE CHINESE UNIVERSITY OF HONG KONG

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A public lecture entitled "The Need for Imperfections" was delivered yesterday (May 14) at The Chinese University of Hong Kong by Professor Peter Townsend, an eminent experimental physicist from the University of Sussex.

In his lecture, Professor Townsend pointed out some common features of imperfect materials and how they can be controlled and engineered to advantage. Semiconductors, which are a result of the presence of "defects", are the most succesful exploitation of imperfect materials. Equally common examples of defect controlled processes and devices include the photographic process, TV phosphors, the colour of gem stones, chemical reactivity, solid state lasers and optical fibres.

According to Professor Townsend, with modern materials such as optical fibres, solid state lasers, defect structures and impurities are critical. Professor Townsend concluded that control of imperfections is the basis of nearly every modern physical technology, whether it be semiconductors, optoelectronics, glass or steel making.

"Crystals are like people, it is their imperfections which make them interesting, " he said.

Professor Townsend is visiting The Chinese University of Hong Kong as the University's Wei Lun Visiting Professor. Apart from yesterday's lecture, he will conduct two seminars at the end of this month.

Professor Townsend's visit to the Chinese University is sponsored by the Wei Lun Visiting Professorship/Fellowship Scheme which invites eminent scholars in various academic disciplines to lecture at the University. The Scheme was established through the generous donation by the Wei Lun Foundation Ltd.

May 14, 1992