



香港浸會大學

HONG KONG BAPTIST UNIVERSITY

FACULTY OF SCIENCE

**Department of Physics &
Institute of Computational and
Theoretical Studies**

COLLOQUIUM

**C₆₀, symbol of nanoscience: bonding
properties on metal surfaces**

By

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Tuesday June 4, 2013

3:15pm – 4:15pm (Tea will be served)

T909 Science Tower, HK Baptist University

Abstract

The molecule buckminsterfullerene, also known as buckyball or C₆₀, has beautiful symmetry, like the (association) football. First made and discovered by man in 1985, C₆₀ is stable enough to exist in nebulae in outer space. Structurally and chemically similar to carbon nanotubes, graphene and graphite, one might expect C₆₀ to interact weakly with other matter, but this is not the case, as our group and others have shown for buckyballs bonded to metal surfaces: a metal surface is often “reconstructed” by C₆₀, i.e. metal-metal bonds can be broken by C₆₀. This will be illustrated with buckyball adsorption on single-crystal surfaces of Cu, Pt, Ag and other metals. The techniques involved include scanning tunneling microscopy, low-energy electron diffraction and total-energy calculations.

Acknowledgement

This work was supported in part by Hong Kong RGC Grant CityU 102707, the CityU Centre for Applied Computing and Interactive Media, and the High Performance Cluster Computing Centre, Hong Kong Baptist University, which receives funding from the Research Grants Council, University Grants Committee of the HKSAR and Hong Kong Baptist University.

Speaker biography

Since July 2012, Professor Michel A. Van Hove has been Director of HKBU's Institute of Computational and Theoretical Studies, and Chair Professor in HKBU's Department of Physics. From 2005 to 2012, he was Chair Professor in the Department of Physics and Materials Science at City University of Hong Kong, and its Head from 2005 to 2011. Between 1978 and 2005, he was Staff Scientist at Lawrence Berkeley National Laboratory of the University of California and the US Department of Energy, and Adjunct Professor at the University of California at Davis from 1998 to 2005. He obtained his PhD in Physics at the University of Cambridge in 1974, and his BSc at the Federal Institute of Technology, Zurich, Switzerland in 1968. His scientific interests have revolved around the atomic-scale structure and properties of surfaces and nanostructures.

All Interested Are Welcome!