

Title Applications of optical switch probes in bioengineering and biomedicine

Speaker Prof. Gerard Marriott
Professor of Bioengineering,
University of California, Berkeley
USA



Date & Time Friday, March 18, 2016 4:00 p.m.

Place I²CNER Hall, Ito campus, Kyushu University

Abstract

I will introduce new optical switch probes and opto-responsive biomaterials that are designed to generate high-contrast fluorescence images of target proteins, to optically control the activity of signaling proteins, and physico-chemical properties of cell micro-environments.

I will focus my talk on the following opto-responsive molecules and biomaterials:

- a), Photochromic analogues of Gleevec and related FDA-approved anti-cancer drugs
- b), Optically-switchable probes for high-contrast imaging of target molecules in living cells;
- c), Opto-responsive hydrogels for high-resolution optical manipulation cell microenvironments

About the Speaker

Prof. Marriott received a BSc (Hons) in Biochemistry from Birmingham University, UK in 1980 and a PhD from the University of Illinois in 1987. He carried out postdoctoral research with fellowships from the Alexander von Humboldt and JSPS. In 1992 he moved as a C3-professor to the Max Planck Institute for Biochemistry in Martinsried and in 1999 he was recruited by University of Wisconsin-Madison to lead a new biophotonics initiative. He moved to UC-Berkeley in 2009 where he directs an innovative research program on novel biosensors and optical microscopy with applications to high contrast imaging and control of biomaterials.

Host: Associate Professor Ki-Seok Yoon

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