



Univerzita Karlova v Praze, Přírodovědecká fakulta

Department of Chemistry, Faculty of Science, Charles University in Prague
invites for a lecture from the lecture series

Quo Vadis Chemie

The Fascination of light: Lanthanide Photonics



which will be delivered by

Jean-Claude G. Bünzli

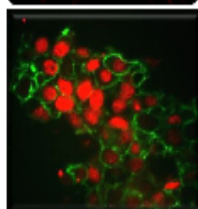
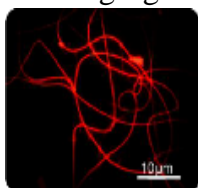
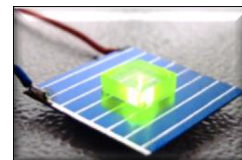
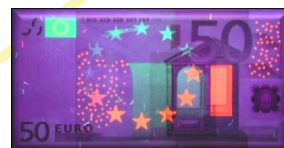
from

Swiss Federal Institute of Technology in Lausanne
(EPFL), Switzerland & Fujian Institute of Research on the
Structure of Matter, Chinese Academy of Sciences,
Fuzhou (Fujian), China

on Monday, May 11, 2015 at 15:00

in Lecture Hall CH2, Department of Chemistry, Faculty of
Science, Charles University in Prague, Hlavova 8, Prague 2

Abstract: Lanthanides have reached a special status in high-tech where they have become totally indispensable. In particular, the unmatched optical properties of lanthanide(III) ions are crucial to the development of optical glasses, lasers, phosphors for screens and economical lighting, optical fibers for telecommunications, security inks and counterfeiting tags, bio-analyses and bioimaging etc.



After introducing lanthanide luminescence, the lecture focuses on two aspects. (i) Development of highly luminescent complexes/materials and explains the strategies adopted to enhance light emission and to avoid non-radiative de-activation. (ii) Biomedical applications of lanthanide luminescent probes and bioconjugates. The use of these luminescent stains extends from time-resolved immunoassays to cell and tissue imaging or photoactivatable drug delivery, for instance in the case of photodynamic therapy of cancer.