



HOKKAIDO UNIVERSITY

AMBITIOUS LEADER'S PROGRAM

Fostering Future Leaders to Open New Frontiers in Materials Science

Ambitious 物質科学セミナー

The Engineering of Surfaces: from particles to solar cells

Professor David A. Lewis

Flinders Institute for Nanoscale Science
and Technology, Flinders University



令和元年 6 月 5 日 (水) 16:30~18:00

北海道大学 理学部 N-308

In this presentation, I will focus on recent research in two quite different areas:

- (i) The manipulation of the surface chemistry of particles to control their interaction and the rheological behavior in nanofluids. In this part of the presentation, I will discuss the modification of particles through very high attachment density, uniform layers and the surprising rheological behavior of this particles in high solids fluids.
- (ii) The workfunction of interfaces in OPV's are critical to maximize electron and hole transport across the layers, yet depending on how the subsequent layers are deposited, the structure and the properties may not be what is expected. In this part, I will discuss recent results on the chemistry and electronic properties of metal oxides, such as molybdenum oxide deposited as thin films on polymer substrates and how the workfunction changes upon exposure to moisture.

略歴： 2009年までの21年間、産業界(Industrial Research at the IBM, T.J. Watson Research Center, Research management roles at SOLA Optical)で活躍の後、2009年より現職

受賞： RACI Applied Research Medal

連絡先： 北海道大学大学院理学研究院化学部門 村越 敬

(Tel: 011-706-2704, Mail: kei@sci.hokudai.ac.jp)