

令和年 12 月 9 日

応用物理学会北海道支部
会員各位

応用物理学会北海道支部
講演会のお知らせ

下記講演会を開催いたしますので、多数ご参加下さいますようご案内申し上げます。

演題：Oxygen vacancy in complex oxides - The good, the bad, and the ugly

講師：Dr. Ho Nyung Lee 氏

(Director of the Materials Science and Engineering Program, Oak Ridge
National Laboratory)

日時：令和元年 12 月 17 日（火） 15:00～17:00

場所：北海道大学 電子科学研究所 1F 会議室

後援：応用物理学会北海道支部

講演の要旨

Functional ionic defects, such as oxygen vacancies, play a central role in the performance of many advanced information and energy materials. While of immediate benefit for low temperature energy production and storage devices and sensors, the ability to artificially control oxygen vacancy content in any environment is also crucial for variety of functional materials, such as high-temperature superconductors, colossal magnetoresistors, memristors, and spintronic devices. On the other hand, for some of functional materials, such as ferroelectrics, the formation of oxygen vacancies is highly detrimental for the performance and endurance of the ferroelectric polarization. However, achieving deliberate control of the oxygen stoichiometry in the oxide thin films has not been much studied, albite critical for the performance. In this presentation, I will review a synopsis of the major developments and achievements in formation, control, and understanding of oxygen vacancies in correlated oxides. Overall, these results summarize the role, importance, and difficulty in film growth for the right stoichiometry as well as potential for developing next generation energy and functional materials.

世話人 太田裕道

北海道大学 電子科学研究所

電話：011-706-9428 hiromichi.ohata@es.hokudai.ac.jp