

## G. Nénert 博士 (PANalytical B.V.) 講演会のご案内

タイトル

「From pyroxenes to perovskites: Pushing the limits of powder diffraction in the laboratory」

日時 11月16日(水) 15:10~16:10

場所 18号館1F サイエンスフォーラム

Nénert 博士は、これまで、中性子線、X線回折などを用い磁性酸化物の磁気構造、結晶構造について研究を行ってこられました。今回は研究室レベルのX線回折装置を用いたパイロキシン型化合物、ペロフスカイト型化合物の構造解析に関する研究成果についてお話いただきます。講演は英語で行う予定ですが、興味がある方はぜひご参加ください。

<講演概要>

From pyroxenes to perovskites: Pushing the limits of powder diffraction in the laboratory

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Pyroxene materials have been widely investigated due to their interest in mineralogy and more recently due to their magnetoelectric and multiferroic properties. However their crystal structure determination can remain tedious and gives rise to conflicting results. In particular, for  $\text{LiCrGe}_2\text{O}_6$ , powder synchrotron and single crystal laboratory data do not agree. We will show that using highly monochromatized beam with new X-ray optical components on a laboratory system, one can compete with synchrotron radiation.

On the other hand, a long standing interest of material scientists is about perovskites which have been investigated for decades for their applications as piezoelectric, ferroelectrics, sensors, superconductivity, etc. We will discuss recent results of the perovskite  $\text{EuNbO}_3$  where small distortion from cubic symmetry can be revealed using high resolution powder diffraction. In particular, we will compare laboratory results with synchrotron radiation.