

Collaboration research with Osaka University, SPring-8, SSRL and Diamond Light Source

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We started collaboration research with Osaka University, SPring-8, SSRL and Diamond Light Source since October 2020. We focused on an interesting topological magnetic material EuP_3 . We tried to directly present the electronic structure of it, and discovered the origin of its topology.

In our research, we use angle-resolved photoemission spectroscopy (ARPES) to directly observe the electronic structure of EuP_3 , including band dispersions and Fermi surface. Synchrotron light sources can provide high quality light during the ARPES experiments. We visited SPring-8 in Hyogo to carry out x-ray ARPES measurements November 2020. We also carry out online remote experiments at Diamond Light Source and SSRL in December 2020, May 2021 and July 2021.

Although due to the COVID-19 pandemic, we cannot directly visit UK and US. However, the remote experiments are still very efficient. We received high-resolution band dispersion and Fermi surface of EuP_3 . Our collaboration is very meaningful and insightful.

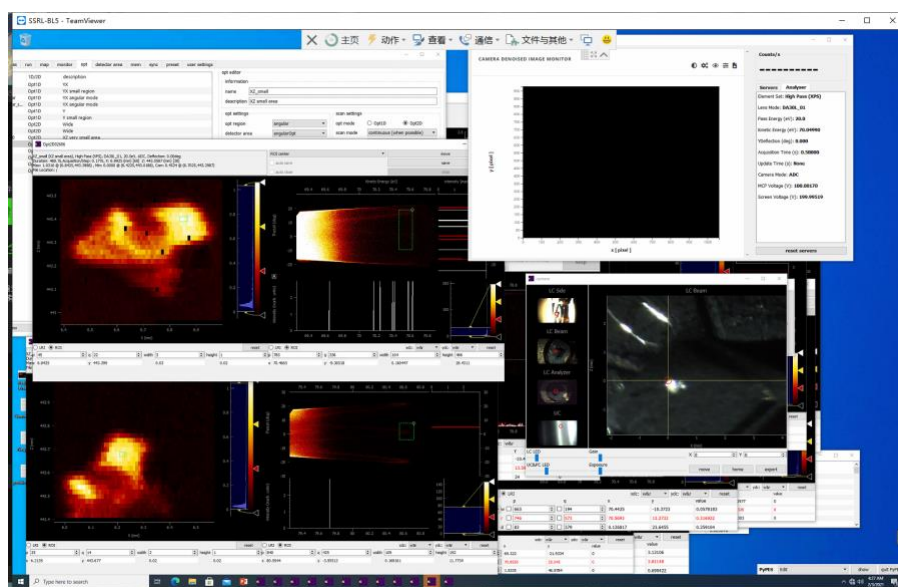


Figure: Remote ARPES experiment at Stanford Synchrotron Radiation Lightsource.