



# **H**AKUBI RESEARCHERS' **A**CTIVITIES IN ICR

**Hakubi Project: Fosterage and Support of  
Young Researchers, Kyoto University**





Program-Specific Assist Prof  
DENIS ROMERO, Fabio  
(Ph D)

**Host Laboratory** Laboratory of Advanced Solid State Chemistry

**Host Professor** SHIMAKAWA, Yuichi

### Outline of Research

The wide range of electronic, magnetic, and transport properties exhibited by oxide materials has led to their widespread adoption as the basis of electronic devices and consequently contributed greatly to the exponential technological development over the past century. Continuing progress is fundamentally dependent on the discovery of new materials and the tunability of their fundamental properties. However, traditional synthetic methods are fundamentally unsuited to the preparation of a wide range of materials that could be imagined, and thus the development of new synthetic protocols is necessary to drive materials discovery forwards. My research focuses on the use of low-temperature topochemical methods and extreme conditions in order to prepare new materials with technologically useful properties for future devices.