# Special Issue

# Synchrotron Imaging and Diffraction Characterization of Advanced Materials

## Message from the Guest Editors

As new materials with novel properties are developed through techniques such as 3D printing, their characterization with current methods become ever more challenging. Many of these properties depend on microstructural tuning at the micron, nano, and atomic scale. The need for higher spatial resolution, as well as of in operando measurements has led in recent years to the development of new and drastic improvements of synchrotron diffraction and imaging techniques. This issue is aimed at giving an overview of current state-of-the-art synchrotron characterization techniques used to study these materials, such as Bragg coherent diffraction imaging, ptychography, Laue nanodiffraction, and diffraction contrast tomography.

## Guest Editors

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## Deadline for manuscript submissions

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*Quantum Beam Science* focuses on application of quantum beams for the study and characterization of materials in their widest sense, and developments of quantum beam sources, instrumentation and facilities. Quantum beams include synchrotron radiation, neutron beams, electrons, lasers, muons, positrons, ions. The journal covers disciplines including, solid state physics, chemistry, crystallography, materials science, biology, geology, earth- and planetary materials, and engineering. Articles presenting multiple quantum beams for complementary studies are welcome.

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