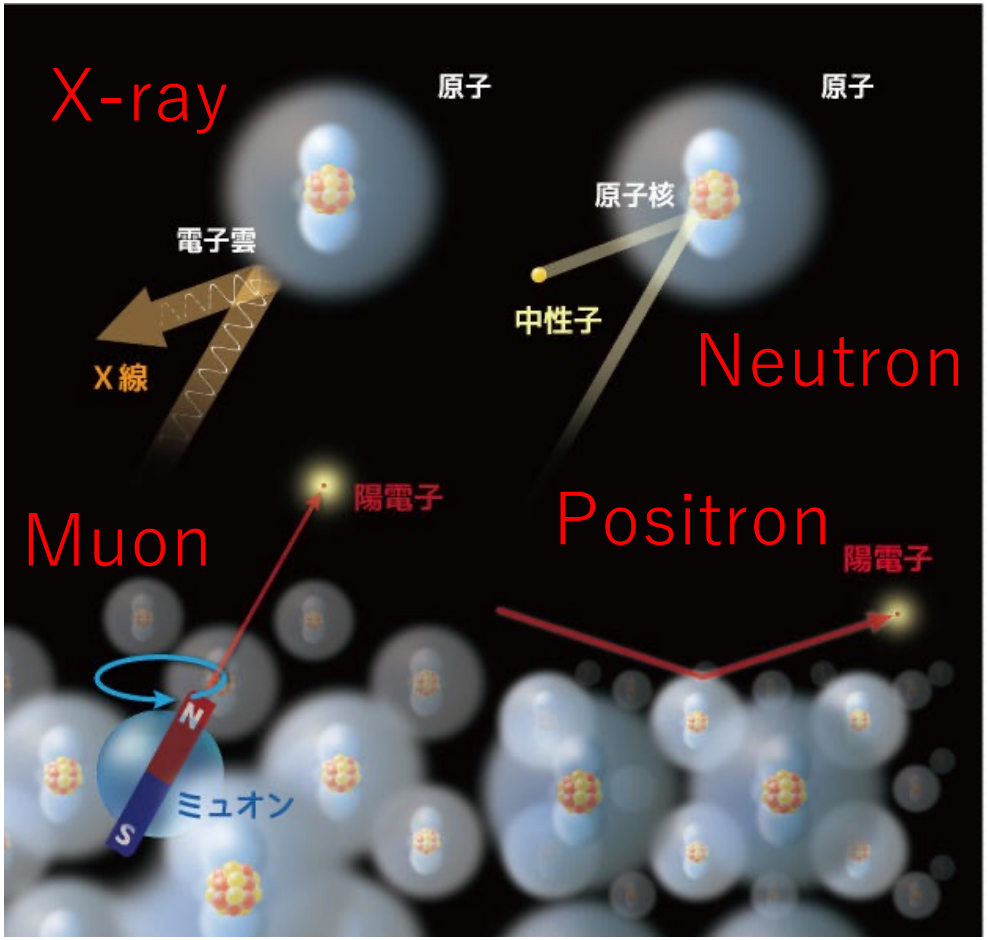
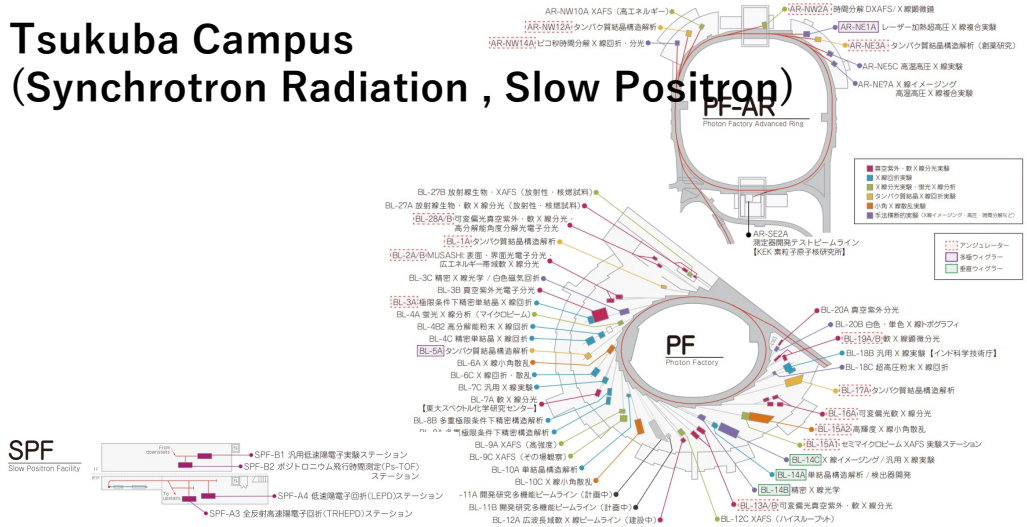
Institute of Materials Structure Science (IMSS)

SOKENDAI

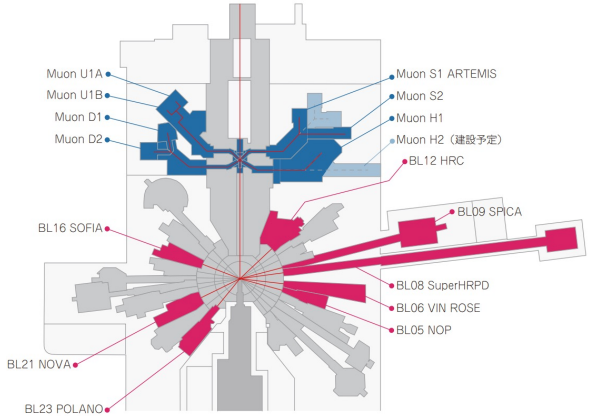
SOKENDAI Materials Structure Science Program



Tsukuba Campus
(Synchrotron Radiation , Slow Positron)



Tokai Campus
(Neutron, Muon)

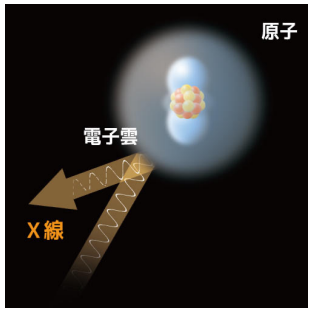


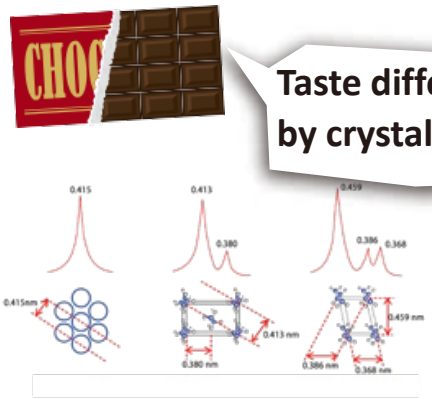
We conduct research on materials and life sciences by using four types of quantum beams (**synchrotron radiation**, **neutrons**, **muons**, and **slow positrons**) produced by the accelerator and we also develop advanced instruments.

Tsukuba Campus

Photon Factory (PF)
Slow Positron Facility (SPF)

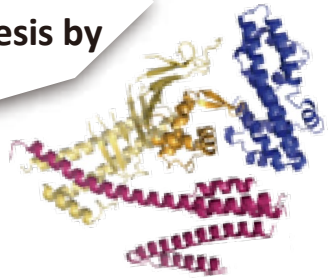
X Synchrotron Radiation alignment and behavior of atoms





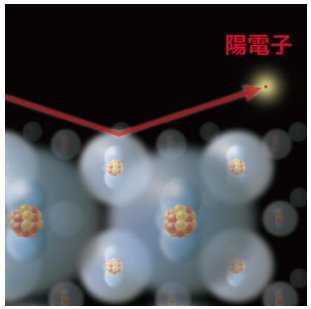
Taste differences by crystal structure

Mechanism of carcinogenesis by H. pylori

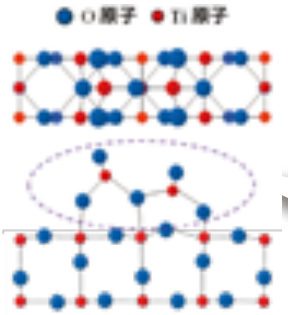


3D visualization of materials

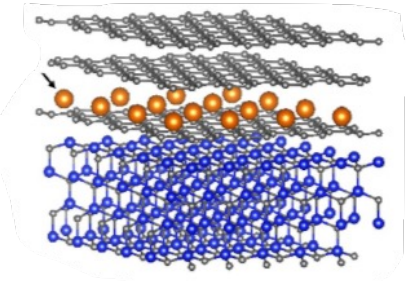
e+ Slow Positron Atomic Arrangement of material surface



rutile-type titanium dioxide TiO2



Asymmetric arrangement of atoms on a photocatalytic surface

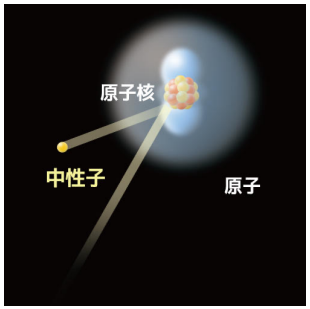


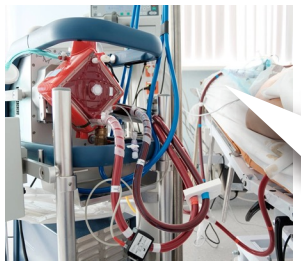
Tokai Campus

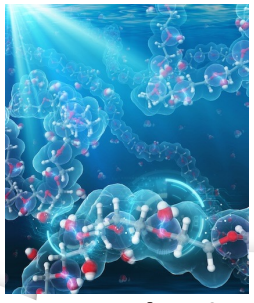
J-Parc MLF

Neutron

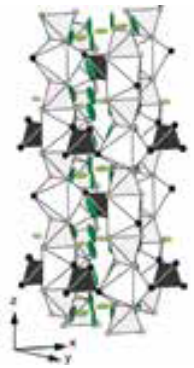
Arrangement and dynamics of nuclei and electron spins.







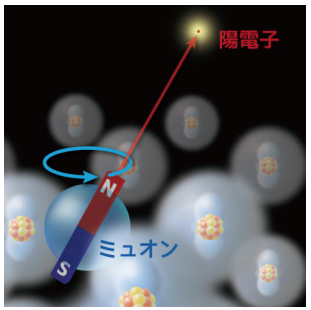
Mechanism of Biocompatibility of Polymers



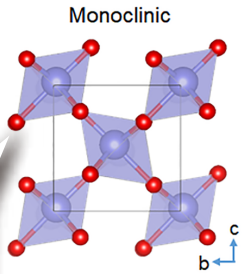
Visualization of ionic pathways

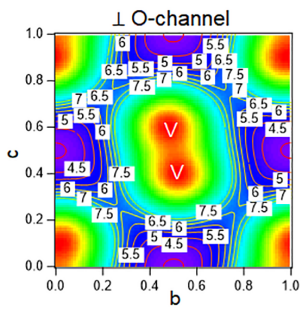
Muon

Positive muons reveal the distribution of magnetic fields in materials.
Negative muons reveal the distribution of elements.



Dynamics of hydrogen in semiconductors



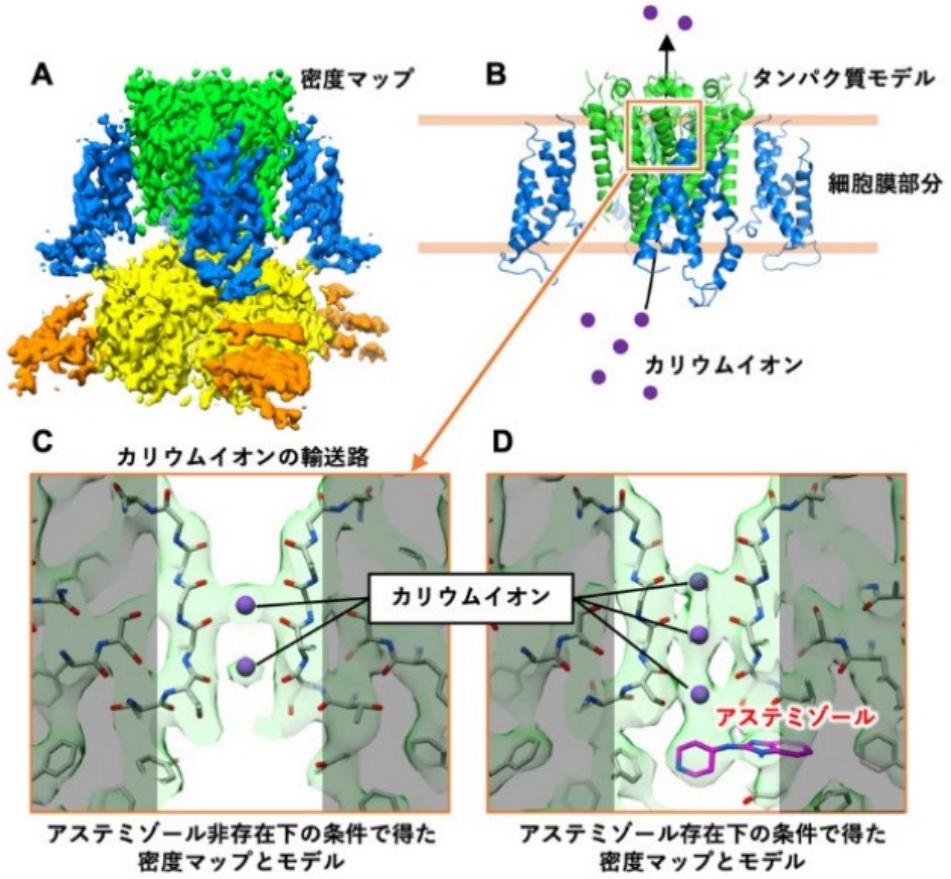


Non-destructive analysis of cultural properties

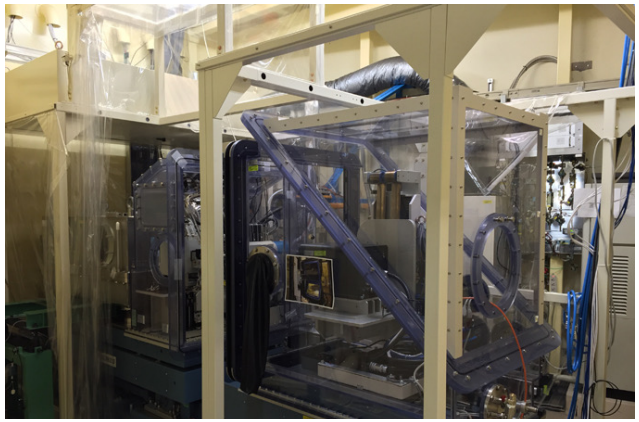
hydrogen behavior in pyrite

Structural Biology Research Center (SBRC)

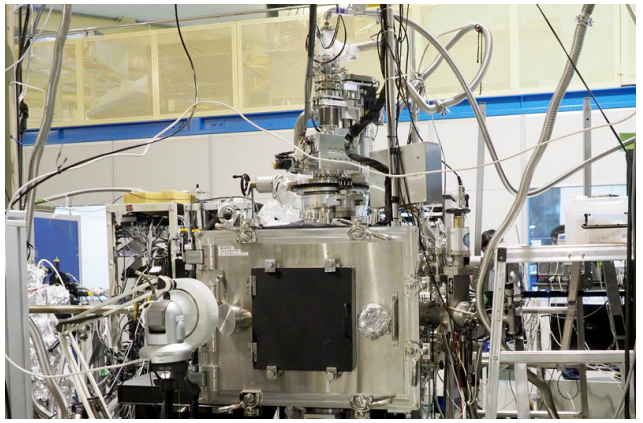
Protein Crystallography by X-ray Crystallography/Small-Angle Scattering and Cryo-Electron Microscopy



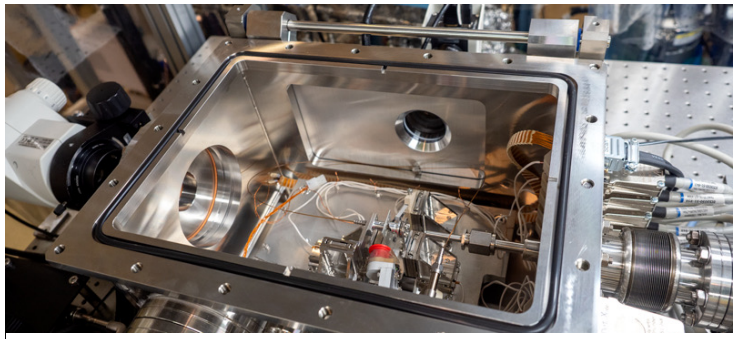
Equipment Development



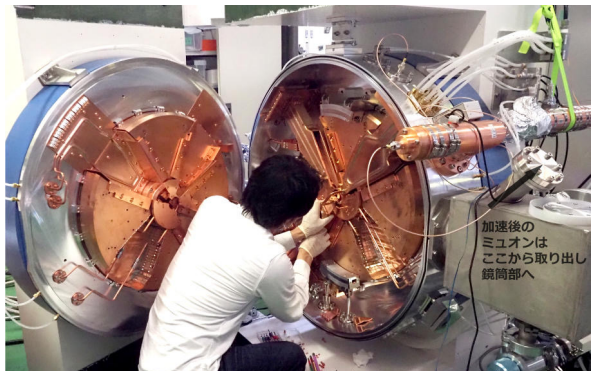
He chamber diffractometer



Resonant soft x-ray scattering



Scanning transmission x-ray microscope



Muon microscope

We also conduct research on the advancement of new experimental and analytical methods and the development of experimental equipment.