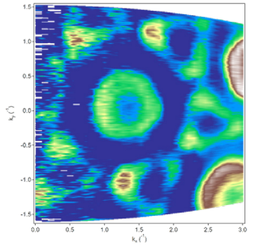
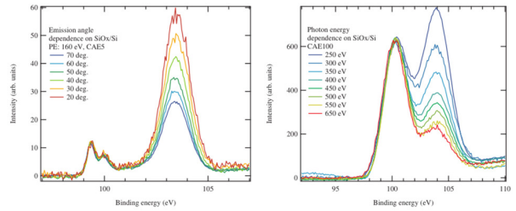
PES

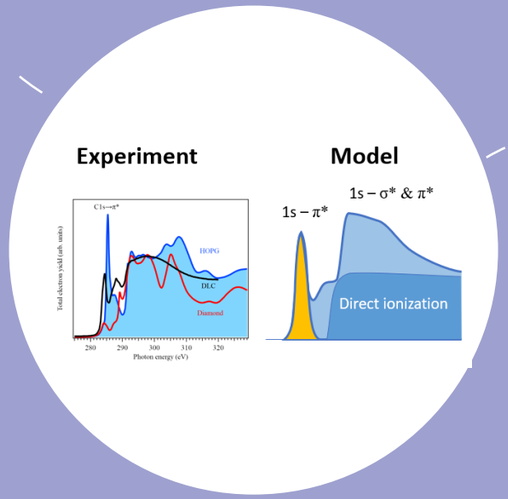
RESULT/APPLICATION



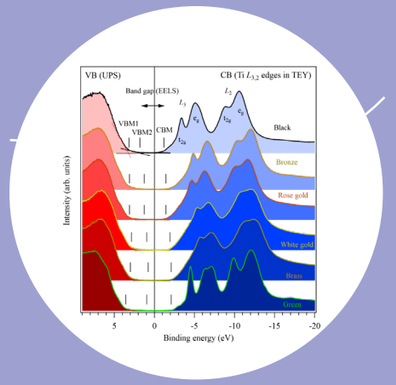
ARPES band map on MoS_2



Angle-resolved and photon energy dependent XPS spectra on Si



NEXAFS spectra on Carbon K-edge

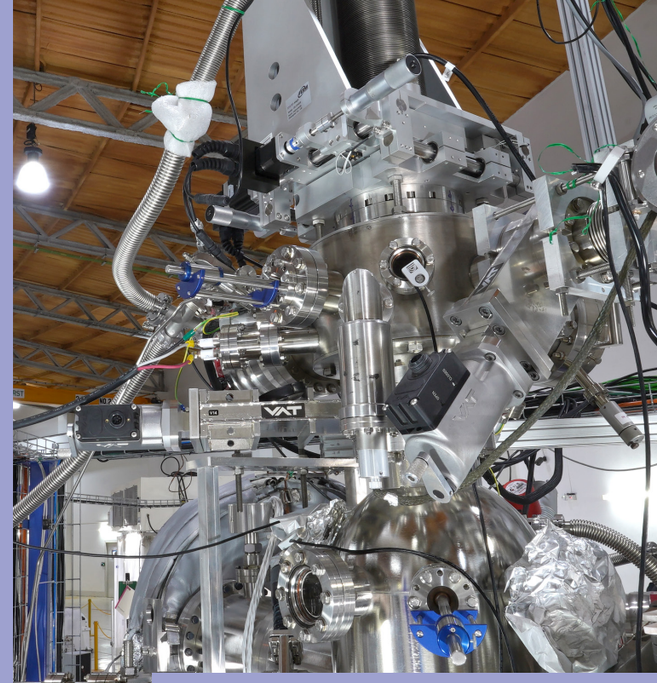


UPS and Ti $L_{3,2}$ edges

CONTACT

Surface Sciences Section
Synchrotron Light Research Institute (Public Organization)
Tel: 044 217 040 ext. 1482
E-mail: SSS@slri.or.th

www.slri.or.th

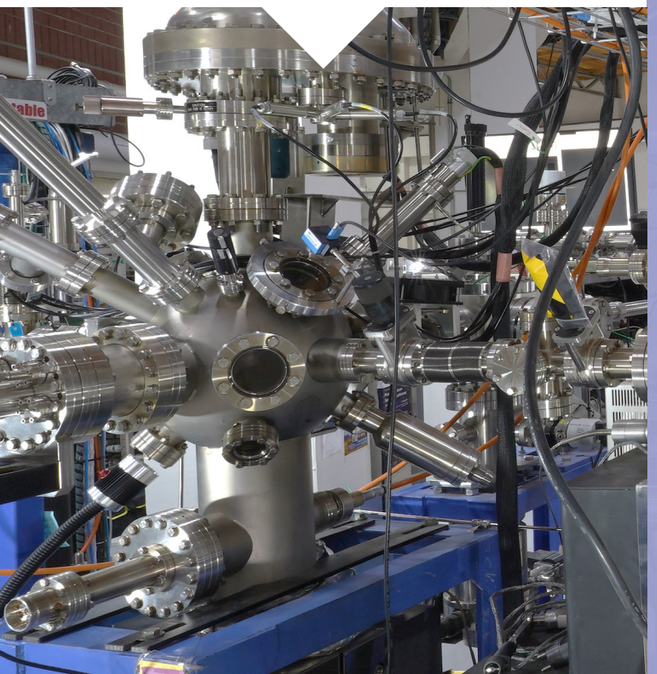


PHOTOEMISSION ELECTRON SPECTROSCOPY (PES)

SYNCHROTRON LIGHT RESEARCH INSTITUTE
(PUBLIC ORGANIZATION)

PRINCIPLE INFORMATION

The soft X-rays from the planar undulator excite the electron above the Fermi level, and the energy, momentum, and number of ejected electrons are then measured to inspect the electronic structure of materials surface such as the band structure, work function, and elemental and chemical compositions. The vacuum ultraviolet light source is also available as a laboratory source for angle-resolved and ultraviolet photoemission spectroscopy. The total electron and fluorescence yield provide a surface and bulk sensitive absorption spectra, respectively, in the light atomic elements such as carbon, nitrogen, and oxygen.



TECHNICAL SPECIFICATION

Category	Specification
Beamline	BL3.2U: PES/PEEM
Photon Energy Range	40–160 eV (G#1), 220–520 eV (G#2), 440–1040 eV (G#3) **Resolving Power:** 10,000 (Simulation) **Lab Sources PES:** He lamp (He I: 21.22 eV, He II: 40.8 eV) **XPS:** Electron gun (up to 5 keV)
Photon Flux (Full beam)	$>10^{11}$ ph/s (60–520 eV) | $>10^{10}$ ph/s (40–60 & 440–1040 eV)
X-ray Beam Size	PES: >0.3 × 0.1 mm² | XPS: > 0.2 × 0.2 mm²
Detector	PES: VG Scienta R4000 XPS: Thermo VG Scientific Alpha110, Hamamatsu MCP
Sample Environment	UHV, conductive, flat, 5 × 5 × 1 mm³, 10–300 K, Ar+ ion gun

SDGs SUPPORT



Advancing energy storage through electronic structure analysis



Driving nano-electronics & semiconductor development at the micro-scale



Characterizing soil organic carbon for carbon sequestration research

PES END STATION

