



- NSLS-II Project, NEXT, ABBIX, and Partner Beamlines deliver world-leading capabilities
 - All together, ~ 60% of the straight sections will be built out within first few years of NSLS-II operations
- NxtGen beamlines will balance the beamline portfolio with complementary, often high-throughput, capabilities and add significant capacity
 - NxtGen will build out ~ 33% of BM/3PW/IR ports
- Further development of the facility is required to realize the full scientific potential of NSLS-II
 - 19 additional beamline proposals are approved but not yet funded

Outline = ID
 Solid = BM / 3PW / IR

8 NSLS-II Project Beamlines

- Inelastic X-ray Scattering (IXS)
- Hard X-ray Nanoprobe (HXN)
- Coherent Hard X-ray Scattering (CHX)
- Coherent Soft X-ray Scat & Pol (CSX1, CSX2)
- Sub-micron Res X-ray Spec (SRX)
- X-ray Powder Diffraction (XPD1, XPD2)

6 NEXT Beamlines

- Photoemission-Microscopy Facility (ESM)
- Full-field X-ray Imaging (FXI)
- In-Situ & Resonant X-Ray Studies (ISR)
- Inner Shell Spectroscopy (ISS)
- Soft Inelastic X-ray Scattering (SIX)
- Soft Matter Interfaces (SMI)

3 ABBIX Beamlines

- Frontier Macromolecular Cryst (FMX)
- Flexible Access Macromolecular Cryst (AMX)
- X-ray Scattering for Biology (LIX)

5 Partner Beamlines

- Spectroscopy Soft and Tender (SST1, SST2)
- Beamline for Mater. Measurements (BMM)
- Microdiffraction Beamline (NYX)
- X-ray Footprinting (XFP)

8 NxtGen Beamlines

- Complex Materials Scattering (CMS)
- Magneto, Ellipso, High Pressure IR (MET/FIS)
- Metrology & Instrum Development (MID)
- In-situ X-ray Diffraction Studies (IXD)
- Materials Physics & Processing (MPP)
- Quick X-ray Absorption Spectroscopy (QAS)
- Tender X-ray Absorption Spectroscopy (TES)
- X-ray Fluorescence Microscopy (XFM)

Note: NSLS-II beamline diagram based on current funding assumptions