☐ **Talk** ☒ **Poster**

The XPD (X-ray Powder Diffraction) Beamline at NSLS-II

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The X-ray Powder Diffraction (XPD) beamline is an insertion device beamline at Sector 28 (28-ID-2 of NSLS-II with a 1.8 T damping wiggler X-ray source. XPD operates in monochromatic beam mode with a Laue-Laue Si(111) monochromator that can tune the beam energy from 30-70keV, predominantly providing world-class monochromatic beam to users at ~67 keV. Different experimental setups at XPD are capable of collecting both angular dispersive X-ray diffraction data (XRD, PDF) and both X-radiographic imaging (Full Field, X-CT, XRD-CT, PDF-CT & XRF-CT) using a variety of area detectors and cameras tailored to the needs of the experiment. XPD provides a suite of *in situ* sample environments including flow cells, cryostreams and hot air blowers, lamp furnaces, and gas handling systems to name but a few. There are also separate endstations at XPD that are operated by external Partner Users that provide XRD and Full Field Tomography measurements (operated by BNL Nuclear Science and Technology Dept.), as well as an 1100-ton hydraulic multi-anvil press installed (MAXPD; operated by SEES – Synchrotron Earth and Environmental Science) which is equipped with a unique DT-25 pressure module capable of studying samples at pressures and temperatures in excess of 20 GPa and 2000°C. Scientific diversity is a calling card of our beamline, so come talk to us about your ideas and we will see how we can help make them a reality!