## Beamline-like capabilities for in-situ X-ray diffraction work using modern in-house instrumentation

Chris Malliakas<sup>1</sup> <sup>1</sup>Northwestern University c-malliakas@northwestern.edu

Current state of instrumentation available for general laboratory use enables experiments that historically were available only at beamlines. In this presentation, a general overview of crystallographic techniques related to in-situ measurements of powder samples under variable temperature, variable pressure, and variable gas flow with temperature will be discussed.