



Contribution ID: 56

Type: **Poster**

High-efficiency diffractometer ERWIN

Friday 6 December 2024 13:45 (3 hours)

The instrument ERWIN, currently being assembled at the MLZ, is a high-efficiency diffractometer designed for rapid data collection, time-resolved measurements, parametric studies and investigations on small samples. ERWIN is characterized by a large two-dimensional wire chamber detector with a virtually seamless coverage of 135° and a vertical angle range of 15° which will allow the characterization of powder samples, textured bulk samples and single crystals. The spectrum of applications ranges from time- and spatially-resolved investigations of battery materials to the kinetics of hydrogen storage materials and deformation mechanisms of engineering materials under the influence of external loads. In this contribution we will present the scientific applications, specifications, current developments and planned expansion stages.

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Session Classification: Poster Session

Track Classification: Structure Research