

Automated sample change systems for SPODI/FIREPOD/ERWIN

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Automatic sample changers not only improve the efficiency in the usage of measurement slots, they also widen the scope of scientific applications. In particular, robotic systems enable to measure large series of samples prepared by different processing routes or by varying the chemical composition. Exemplary small series of such measurements on Li-ion batteries, solar-cell or engineering materials at room temperature have already been carried out using a semi-automated 10-sample carousel. However, there is also a high demand for measurements involving a large number of samples with multiple temperature points. Thus, a large number of proposals would benefit greatly from an automatic cryogenic or a high temperature sample changer.

Therefore we envision that all three powder diffractometers at the new beamline SR8 should use one common pool of automatable sample environments (both for low and high temperatures) including automatic sample changing systems. The technical details of this proposal will be presented in this talk.

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