

Experimental report

08/09/2023

Proposal: TEST-3293

Council: 10/2023

Title: Test of the new D20-dedicated cell for in-situ neutron diffraction

Research area: Methods and instrumentation

This proposal is a new proposal

Main proposer: Thomas HANSEN

Experimental team: Vadim V. SIKOLENKO

Oliver KORUP

Andres AQUINO

Local contacts: Thomas HANSEN

Samples:

Instrument	Requested days	Allocated days	From	To
D20	1	1	28/06/2023	29/06/2023

Abstract:

The prototypes of two new cells for D20 diffractometer will be tested
saphire single crystal cell with Cu-ZnO catalyst in order to test time and spatial resolution
Ni single crystal as a material for new cell to check reliability

Proposal TEST-3293

Test of the new D20-dedicated cell for in-situ neutron diffraction

Main proposer: Thomas Hansen

Co-proposers: Holger Kohlmann

Vadim Sikolenko

Oliver Korup

Andres Aquino

1. The prototype of the new sapphire single crystal cell for in-situ measurements at the D20 diffractometer has been tested.

The positioning, opacity, spatial and time resolutions were tested.

2. Ni single crystal for new in-situ cell for chemical reaction studies under high pressure and high temperature conditions has been tested. All preliminary work for further development of the new cell has been fulfilled.