German Conference for Research with Synchrotron Radiation, Neutrons and Ion Beams at Large Facilities



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The SINE2020 Industry Consultancy and the role of neutron science in industrial innovation

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How to develop an innovative process for efficient and high-quality development of advanced materials and components?

Neutrons can see structures evolving in solid state materials, neutrons can see layers diffusing into each other, neutrons can assess the composition and stability of colloidal mixtures - with neutrons you can see materials from the inside, non-destructively, and while the step of interest in a manufacturing process is being taken. The EU-Horizon2020 project SINE2020 aims at strengthening the cooperation between industry and European neutron sources. Free of charge, the project offers training and education of industrial researchers and the possibility to perform test measurements at the participating neutron facilities.

In this presentation we introduce the offer by the industry consultancy initiative in SINE2020 and show different neutron based analytical techniques we provided to industrial users on the basis of industry-relevant examples:

- Residual stress measurement with neutron diffraction
- Behaviour of a surfactant by small angle neutron scattering (SANS)
- Insights in fuel cells with neutron radiography
- Investigation of novel drug delivery systems by SANS
- and more

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