



Contribution ID: 21

Type: **Oral contribution**

Neutron irradiation experiments on HTS

Thursday 16 January 2025 14:50 (20 minutes)

The results of two decades of neutron irradiation experiments on high temperature superconducting tapes (coated conductors) will be summarized. The change of the critical current is determined by a competition of improved pinning by the introduction of nanometre sized defects and a reduction of superfluid density by pair-breaking scattering on point-like defects. The latter is directly evidenced by the reduction of the transition temperature and leads to a universal degradation not depending on the particular tape or the type of radiation.

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Session Classification: Irradiation experiments for superconductors