

HAS - He Atom Scattering



At the INFN-TASC laboratory is presently available a compact He beam apparatus developed for high resolution studies of crystal surface structures by He diffraction and of surface vibrations by He energy-loss spectroscopy. The **HAS apparatus** has been developed by Prof. Fernando Tommasini, who leads the Surface Structure Division.

Reference:

D. Cvetko, A. Lausi, A. Morgante, F. Tommasini, K.C. Prince, and M. Sastry, Meas. Sci. Technol. 3, 997 (1992).

source-sample-detector angle	110°
beam angular resolution	0.135°
beam energy range	19 - 100 meV
energy resolution (19 meV beam)	0.2 meV
manipulator angular precision	0.005°
transfer width	1200 Å
chamber base pressure	<10 ⁻¹⁰ mBar
sample holder temperature range	150 - 1300 K

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