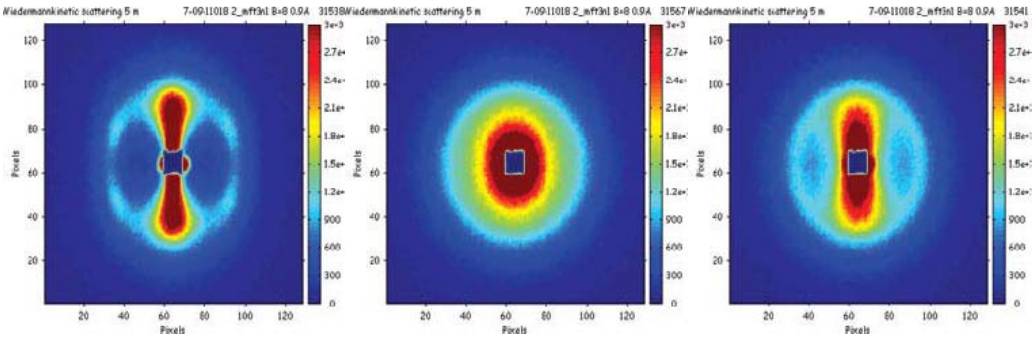
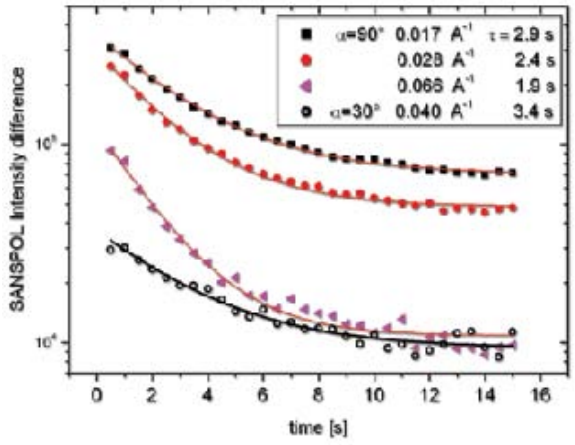
**Time resolved SANSPOL investigations in concentrate Co-ferrofluids**



Polarised Small Angle Neutron Scattering (SANSPOL) investigations in concentrated Co-ferrofliuds have revealed a pseudeo-crystalline hexagonal ordering of core-shell nano-particles induced by an external magnetic field. Time-resolved stroboscopic SANSPOL experiments allowed to study the dynamics of the relaxation process in an osczillating magnetic field. [A. Wiedenmann et al., Physical Review Letters **97**, 057202 (2006)]




Decay of local ordering induced by external magnetic fields in a concentrated Co-ferrofluid as measured by time-resolved SANS: a-c: 2D-SANS intensities t times t=0 s, 2 s and 15 s after switching off the horizontal magnetic field of 0.5 T.d) SANSPOL intensity differences in sectors perpendicular to H (..=90°) at different values of Q (solid symbols) and at Q1 in the sector 30°.The solid lines correspond to fits of an exponential decay with the time constants $\tau$ which depend on Q .