

Non-equilibrium Dynamics of Cu_3Au

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X-ray intensity fluctuation spectroscopy (XIFS) has been primarily used for studying equilibrium fluctuations using small angle scattering. Here we present data on non-equilibrium fluctuations in the order-disorder Bragg peak of Cu_3Au after quenching it through its phase transition. One the keystones of non-equilibrium dynamics is theory of dynamical scaling where domain growth after a quench grows with a power law. XIFS measurements of two-time correlation functions is providing a new kind of test for this theory. Recently, it has also been found that the speckles in the (100) peak are non-Gaussian. Quantifying this behaviour leads to new information on domain distributions in Cu_3Au .