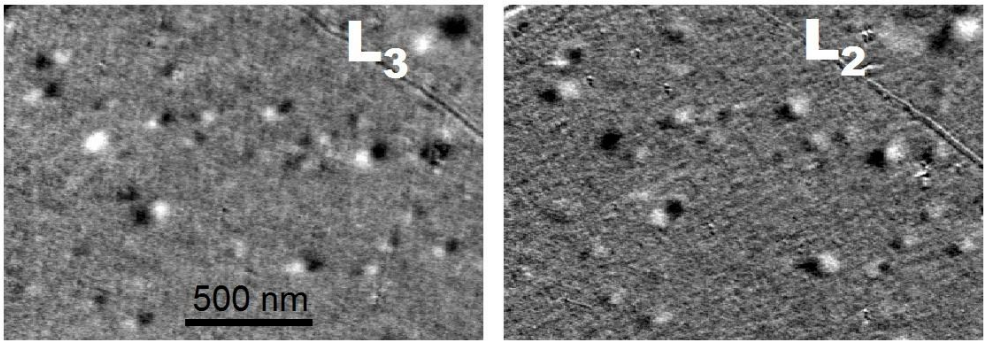
MAGNETIC NANOCRYSTALS IN GaN SEMICONDUCTOR

During July 2013, diluted magnetic semiconductors were measured within the framework of a collaboration with Dr. D. Arvanitis (Uppsala University, Sweden), Dr. I. Kowalik (Institute of Physics, Polish Academy of Sciences) and Dr. M.A. Niño (IMDEA Nanociencia, Madrid). The magnetic configuration of Fe-based nanocrystals embedded in a GaN semiconductor was imaged by XMCD-PEEM at room temperature.



XMCD-PEEM images at the FeL3 and FeL2 absorption edges (the contrast inversion confirms the ferromagnetic character of the domains). Despite their small size, typically around 50 nm, most crystals contain more than one magnetic domain.