

Abstract Submitted
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Magnetic Resonance Force Microscopy Combined with Surface Topography SHIGENORI TSUJI, YOHSUKE YOSHINARI, JEOL Ltd. and CREST-JST, Japan, JEOL LTD. AND CREST-JST, JAPAN COLLABORATION — In this presentation, we will show magnetic resonance force microscopy imaging combined with surface topography. The individual and combined images taken in the same coordinate are presented for extraction of the position, shapes and spin density distribution of target phantoms. This imaging technique is useful applied when the surface needs to be investigated in relation to the influence of a material buried below the surface. In our method, the surface topography was observed by the AFM with tapping mode. The spin density distribution was measured by the MRFM with the cyclic saturation technique. The AFM and MRFM experiments were made one after another by using the same experimental set-up, and their images were merged together afterwards. The sample consists of two kind of materials, one is DPPH containing unpaired spins and the other is a glass bead. DPPH particles with the size of 5~8 micrometer and a 8.8 micrometer single bead were glued on a commercial cantilever.

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