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New Perspective for Biomedical Productions: Application of Cast Amorphous Microwire for Electromagnetic Absorption

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The technological use of high and ultra-high frequencies in medical engineering has led to the need of creating electromagnetic shielding's. The absorption properties of films made of a parallel array of cobalt based microwires have been studied by noise suppression experiments. The absorption S_{21} parameter values observed are of -2 dB at 40 GHz, the insertion losses are registered below -0.2 at 1 GHz, for two films placed in the top of a 50 μm width CPW signal line. The losses profile registers mainly eddy current losses as the origin of the observed absorption.