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M1Po2D-08 [50]: Analysis of negative magnetoresistance behaviors in diluted granular multilayers system at low temperatures

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In this work we will discuss several theories explaining the phenomena of negative magnetoresistance (magnetoconductivity) in diluted granular multilayers samples in insulating side of the Metal-Insulator Transition (MIT). These theories will be confronted with experimental measurements in order to try to provide physical explanations for these phenomena. We re-used in our modeling investigation, experimental data published by H. G. Silva et al [1]. Variable Range Hopping (VRH) conduction was observed in the samples at low temperatures with magnetic fields.

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