

Origin of the Magnetic Proximity Effect

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Abstract

The magnetic proximity effect (MPE) has attracted the attention of theorists and experimentalists for at least three decades. Lately, the relevance of the effect for the development of nanodevices has revived interest on the subject. Here we review how the field has evolved, centering our attention on metal-metal and metal-insulator systems. We describe, and critically compare, the different theoretical approaches that have been put forward, as well as their limitations. An evaluation of the relationship between existing theories and available experimental results is also attempted.