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Spin-polarized scanning tunneling microscope and the Kondo effect KELLY PATTON, STEFAN KETTEMANN, I. Institut für Theoretische Physik Universität Hamburg, Hamburg 20355 — We calculate the tunneling current between a spin-polarized scanning tunneling microscope (SP-STM) and a Kondo impurity on a metallic substrate, including the effects of the spin-polarization of the SP-STM on the adsorbate. This spin-polarization breaks the spin symmetry of the Kondo system, similar to an applied magnetic field, which leads to a splitting of the Abrikosov-Suhl-Kondo resonance. The amount of splitting is controlled by the strength of the coupling between the impurity and the SP-STM tip.

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