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Spin polarized scanning tunneling microscopy of an antiferromagnetic surface JÉRÔME LAGOUTE, CYRIL CHACON, VINCENT REPAIN, YANN GIRARD, SYLVIE ROUSSET, Université Paris Diderot - CNRS — Spin polarized scanning tunneling microscopy is a powerfull tool for the invetigation of the local magnetism of surfaces and model systems. The Cr(001) exhibits large terraces which are antiferromagnetically coupled. Magnetic contrast can be achieved on this surface even with a non negligeable surface contamination as we will show. The spectroscopy of the Cr(001) at the atomic scale show specific signatures which will be discussed in detail. In order to get deeper insight in these features we deposited Cr on Cr(001) and studied its spin polarized spectroscopy. This study is indeed necessary in order to understand the electronic and magnetic structure of model systems for nano-spintronics by adsorbing single objects on Cr(001).

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