

## Curie Temperature of Fe Monolayer

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Fe monolayers (ML) uncapped and capped by gold layer have been prepared on 2 ML thick gold films on W(110) under ultrahigh vacuum condition. The magnetic properties of the layers are investigated with Spin Polarized Low Energy Electron Microscopy (SPLEEM).

1 ML of Fe appears to be magnetic at room temperature. The magnetic asymmetry increases as the Fe monolayer is covered by 1 or 2 ML of gold.

The Curie temperatures  $T_C$  of the uncovered and Au-covered Fe monolayers have been determined. They depend clearly on the substrate step density  $s$  (Fig. 1) and follow a scaling law:  $[T_C(I) - T_C(s)]/T_C(I) = s_0/s$ , where  $T_C(I)$  is the Curie temperature of the monolayer without steps.

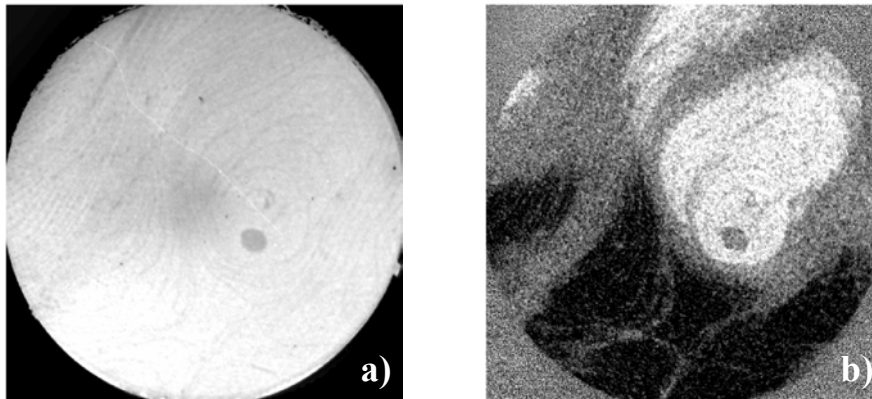


Fig. 1 LEEM (a) and corresponding SPLEEM (b) images of 1 ML Fe covered with 1 ML Au at about the Curie temperature. In (b) white and black regions show ferromagnetic domains while grey regions are already above  $T_C$ .  $T=333$  K, FOV=14 microns.