Title: CVD of CrO2 thin films: Influence of the deposition parameters on their structural and magnetic properties

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Abstract: This work reports on the synthesis of CrO2 thin films by atmospheric pressure CVD using chromium trioxide (CrO3) and oxygen. Highly oriented (100) CrO2 films containing highly oriented (0001) Cr2O3 were grown onto Al2O3(0001) substrates. Films display a sharp magnetic transition at 375 K and a saturation magnetization of 1.92 mu(B)/f.u., close to the bulk value of 2 mu(B)/f.u. for the CrO2.

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