

Séminaire SOLEIL

Induced ferromagnetic order in (Ga,Mn)As in epitaxial Fe/(GaMn)As heterostructures

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Invité par Fausto SIROTTI

Lundi 22 novembre à 14h00
Petit Amphi – Bât. Accueil SOLEIL

Potential integration of Diluted Magnetic Semiconductors (DMS) in spintronics applications rely on a firm understanding of the magnetic ordering mechanism as well as on the ability to induce ferromagnetism above room temperature. In the most frequently studied DMS material (Ga,Mn)As, the Curie temperature is today limited to about 200 K. Here we demonstrate that the growth of Fe/(Ga,Mn)As heterointerfaces can be efficiently controlled by epitaxy, and that a robust ferromagnetism of the interfacial Mn atoms is induced by the proximity effect at room temperature. Chemically selective probes, complemented by theoretical calculations, were used to monitor both the temperature and magnetic field dependence of the Mn magnetic moment in the semiconducting host. We identified distinct Mn populations, each of them with specific magnetic character. A broad collaborative research effort is active aiming at the understanding and control of the interface proximity effects.



Ce séminaire sera suivi d'une pause-café



Formalités d'entrée : accès libre dans l'amphi du Pavillon d'Accueil. Si la manifestation a lieu dans le Grand Amphi Soleil du Bâtiment Central, merci de vous munir d'une pièce d'identité (à échanger à l'accueil contre un badge d'accès).

SYNCHROTRON SOLEIL

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