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SEMINAIRE



Service de Recherches de Métallurgie Physique

DEN/DANS/DMN

Salle de réunion du SRMP – Bâtiment 520 – Pièce 109

Ab initio Studies on Y, Ti and O Interactions with Vacancies in bcc-Fe

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Swelling resistant steels hold the key to maximizing efficiency of the future generation nuclear reactors. Oxide dispersion strengthened (ODS) steel is one of the candidate alloy pursued seriously in recent times. Formation of nanostructured oxide particles during mechanical alloying process and their excellent stability underline the superior properties of these ODS alloys. While extensive experimental activities are going on to perfect and improve the performance of ODS alloys, only very few theoretical work addressed the fundamental understanding of the nanocluster formation and their stability. In this presentation, I will discuss our first-principles calculations carried out at SRMP for the past 6 months and address some of the issues related to behavior of key constituents of the nano-precipitates in the α -Fe matrix.

This work has been done within the frame of the CEA-IGCAR collaboration.

Vendredi 29 janvier 2010 à 10h30

N.B : ***Les visiteurs de nationalité étrangère hors Union Européenne sont priés de bien vouloir avertir impérativement 3 semaines à l'avance – les visiteurs de l'Union Européenne 1 ou 2 jours avant le séminaire – le Secrétariat du Service de leur entrée sur le Centre :***
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