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énergie atomique • énergies alternatives

SEMINAIRE



Service de Recherches de Métallurgie Physique

DEN/DANS/DMN

Salle de réunion du SRMP - Bâtiment 520 - Pièce 109

Nanostructured Materials for energy applications

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The use of nanostructured material in electronic, energetic and nuclear industry, are currently booming because of their various unique properties (physic, thermoelectric, magnetic, mechanic, optic) that principally follow from two characteristics of the nano-objects: the high density of microstructural defects and the high specific surface area. As dimensions are scaled down, nano materials also have different properties than the usual massive material. We are looking to improve certain material properties or invent new properties by refining their structure.

In this seminar, I will develop three different topics where the material performances have been improved because of the nanostructured of the materials: (1) the nanostructured ferritic alloys, (2) the lithium ions batteries, and (3) the PbTe nanostructured bulk materials. In all of areas of exploration, my approach was to combine physically-based multiscale models with experimental characterization in a multidisciplinary approach to investigate, understand and model the dynamic mechanisms, controlling the structures and properties of structural materials from the atomistic to engineering scales.

Mardi 22 Mai 2012 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 : Tel : 01 69 08 66 64 - Fax : 01 69 08 68 67

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