SEMPARIS – Séminaires en région parisienne

http ://string.lpthe.jussieu.fr/semparis/

Colloquium Pierre et Marie Curie

Mardi 1 Avril 2014, 16 :30
IMPMC, Amphi théâtre ASTIER (Bâtiment Esclangon)
Domaines : physics.bio-ph

Titre : *Water as a fuel : the materials basis for passive plant movements*

Orateur : **Peter Fratzl (Max Planck Ins ?tute of Colloids and Interfaces)**

Résumé : *Dead plant bodies such as seed capsules are able to generate movement by the cyclic absorption of water from the environment. This is based on water uptake by a composite of cellulose nano-fibrils and a polymer matrix in the plant cell wall. Depending on the detailed architecture of the cellulose fibrils, this leads to the generation of stresses and to complex movements. The underlying physical processes provide guidelines for the development of mobile materials architectures which might be useful for many applications, including soft robotics.*