Faculté de pharmacie

Séminaire de l'axe

« Formulation et analyse des médicaments »

Differential Dynamic Microscopy: a new tool to characterize suspensions of colloidal and living particles.

Vincent Martinez, Marie Curie Post Doctoral Research Associate

School of Physics, Institute for Condensed Matter and Complex Systems, University of Edinburgh

Mercredi, 13 novembre 2013

Pavillon Jean Coutu

12h00 – S1-151

À l'invitation du professeur Xavier Banquy

I will present Differential Dynamic Microscopy (DDM) as a high-throughput method to measure the dynamics of suspensions of particles, such as colloids or microorganisms, based on standard imaging microscopy. Instead of tracking individual particles, one analyzes the spatiotemporal fluctuations of the intensity in the suspension from time-lapse images and obtains the intermediate scattering function of the system – a similar quantity obtained by Dynamic Light Scattering (DLS) often used to measure diffusion and therefore particle size distribution. In this seminar, I will show the theoretical framework of DDM and present several examples spanning from diffusion of colloids in complex environment to motility of microorganisms, which are usually not possible with DLS.

Ce séminaire a été rendu possible grâce à la collaboration de Rx&D

Université de Montréal