



Séminaire externe

Vendredi 16 mars 2018 à 11h00

Salle de conférence du CBM

A Soft Matter Approach to studies of Molecular Crowding in Cells

Up to 40% of the entire available volume in living cells is occupied by different macromolecules, particles and other structures. This results in strong "excluded volume" effects that affect molecular diffusion as well as the kinetics of enzymes. Biomolecules also interact with each other via non-specific (e.g. electrostatic) interactions. In addition, the structure inside cells induces both nanoscale and microscale confinement.

A simplified version of the crowded environment is one where nanometer-scale particles, called crowders, mimic the dense composition of the cell. We have examined simple physical model systems - polymers and nano-particle crowders in aqueous solution - where we can study the role of macromolecular size ratios, charge, and micro- and nano-scale confinement on molecular diffusion. In this talk, I will report findings on macromolecular crowding using the complementary experimental techniques, nuclear magnetic resonance and neutron scattering.

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Invité par Francesco Piazza
