



**INSTITUT DE MINERALOGIE,  
DE PHYSIQUE DES MATERIAUX ET DE COSMOCHIMIE**

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**SÉMINAIRE**  
**Lundi 30 juin, 10 h 30**

*Salle de Conférence, 4ème étage, Tour 22-23, Salle 1  
IMPMC, Université P. et M. Curie, 4, Place Jussieu, 75005 Paris*

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**NATIVE ION MOBILITY-MASS SPECTROMETRY:  
FROM FLEXIBLE PROTEINS TO ION CHANNELS**

After a brief introduction into the field of native mass spectrometry and ion mobility analysis of protein complexes, we discuss how high-mass modified instrumentation can give powerful insights into the stoichiometry, subunit composition, size and shape of biomolecular particles.

We will show recent data on protein conformational studies and protein complexes which are involved in the regulation of gene expression. The example of SMC proteins, which are crucial for the structural maintenance of chromosomes, illustrates the ability of ion mobility approaches to link information on complex assembly with the topology of the functional unit in heterogeneous systems.

Recently, we have also been studying ion channels in detergent micelles and nanodiscs, and have been able to show the gradual opening of the Mechanosensitive Channel of Large Conductance (MscL) in response to the binding of a charged drug molecule inside the channel which mimics the pressure on the bulk membrane.