



INSTITUT DE MINERALOGIE, DE PHYSIQUE DES MATERIAUX ET DE COSMOCHIMIE

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SÉMINAIRE

Mercredi 11 juin, 10h 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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Density-driven structural transformations in network-forming glasses

The mechanisms of density-driven structural collapse in network-forming glasses like B_2O_3 , SiO_2 , GeO_2 and $GeSe_2$ will be considered, where the debate is informed by the results obtained from *in situ* high-pressure neutron diffraction experiments made with a Paris-Edinburgh press. The diffraction data are compared to new molecular dynamics simulations, made using schemes that suit the materials under investigation. In the case of oxide materials, we will show that the coordination number of network-forming structural motifs, which play a key role in defining the topological ordering, can be rationalized in terms of the oxygen packing-fraction over an extensive pressure and temperature range.