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Laboratoire PMMH
10 rue Vauquelin, 75231 Paris Cedex 05



Séminaire PMMH

Salle de réunion du PMMH, Campus Jussieu, Bâtiment Cassan A, 1^{er} étage

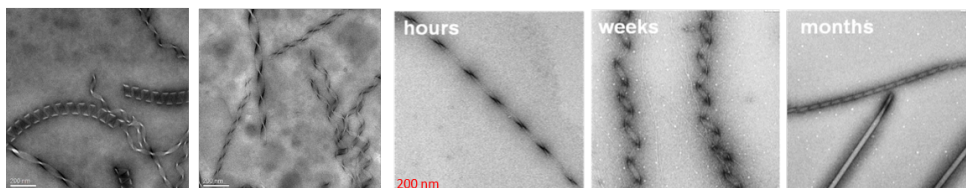
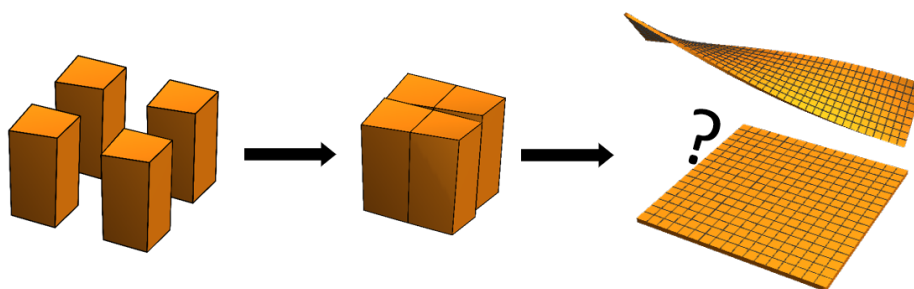
Vendredi 17 janvier 2020, 11h00-12h00

Doron Grossman

Collège de France

From Molecules to Helical Ribbons - Shape and Shape Fluctuations

Self assembly of molecules into supramolecular structures is an important process through which non trivial structures are formed in nano-metric scale. The resulting structure depends on chemical and physical principles that govern the process, and may be sensitive to the exact conditions in which they are formed. Typically, such self assembled structures are residually stressed, due to mismatch of the constituent element. Identifying the principles and ways in which different structures are formed, affects significantly the ability to control, guide and manipulate self assembly. In this talk I will show how to relate chemical and physical properties of single (or few) molecules to the shape and mechanics of the resulting, residually stressed, elastic of structures. I will then continue to discuss the unique thermodynamics of the ribbons stemming from these residual stresses. Our predictions are quantitatively confirmed experimentally, suggesting a new framework for quantitative study of a large variety of self-assembled nanostructures.



Prochain séminaire : vendredi 24 janvier 2020, Kristina Davitt (LPENS)
Programme des séminaires : www.pmmh.espci.fr, onglet *Séminaires PMMH*
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