



PhD Project : Fluctuations in confined system.

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Project description:

Nano-technology and microfluidic make use of small system and of strongly confined fluids. As a general statistical rule when the size of the system decreases the role of fluctuations increases. However two questions arise naturally for confined fluids: do fluctuations play a role? What kind of role could they play in the above-mentioned applications? These questions have been recently addressed mainly theoretically but only a few experiments have tried to answer to them. The purpose of this thesis will be to give some answers to these questions experimentally in confined fluids and electric nano-circuits. It will require the development of new experimental tools, which will be associated to existing ones (AFM, dielectric measurements etc.)