

Physics of nanosystems at extreme conditions

- 1. Organismes (avec affiliation, usuellement 2 ou 3 personnes) :**
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- 2. Parrainage ou lien avec des sociétés savantes, des GDR ou autres structures :**
Lien avec le Réseau Haute Pressions du CNRS
- 3. Résumé de la thématique du mini-colloque :**

Subjecting condensed matter to extreme conditions allows theories and models to be probed, new states or systems to be discovered and even new materials to be engineered. The same applies when the scales of matter are reduced to the nanoscale: downscaling impacts the physical properties, including the extreme conditions phase diagram of the studied systems and the associated properties. The application of extreme conditions to nanosystems constitutes then a large field of investigations embracing both fundamental aspects and applications.

We invite contributions tackling these different aspects using either experimentation, theory, modeling or any combination of them. This includes the study of systems such as nanotubes, 1-D chains, graphene, van der Waals systems, nanoparticles, nano-composites, etc. Extreme conditions may include pressure application, large strains, high temperatures or even extreme magnetic or electric fields.