



## **NanoLab Talk**

**Thursday, 21<sup>st</sup> June, 2018 – 14.30**

Seminar Room 1° floor

Department of Energy – Cesnef (Building 19) via Ponzio 34/3 Milan  
Politecnico di Milano

# **“Porous carbon materials for gas adsorption”**

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### **Abstract:**

Porous carbon materials are widely used in our day-life in many multipurpose applications because they have very good physical properties (thermal and electrical conduction, specific surface area, hardness, chemical stability) and at the same time they are inexpensive and eco-friendly since they can be synthesized from many organic wastes.

Since last century their capability of adsorbing different species of gases is investigated but the adsorption mechanism remained unveiled until the last decade thanks to the progress in technology, modelling and experimental techniques, as high precision pressure gauges used in new porosimeter, non-local density function theory used to calculate the material's pore size distribution, inelastic neutron scattering used to investigate the vibrational state of the adsorbed species.

I'll focus my seminar on hydrogen adsorption on commercial carbon materials for storage applications investigated by mean of these new characterization methods at University of Calabria (Rende), ISC-CNR (Sesto Fiorentino), Max Planck Institute for Intelligent Systems (Stoccarda) and ILL - Institut Laue Langevin (Grenoble).

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