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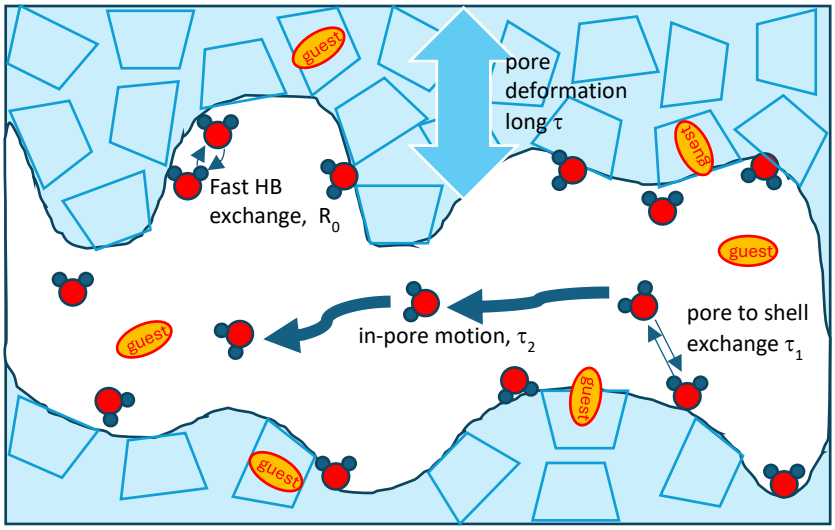
FFC-NMR CHARACTERIZATION OF NANOSPONGE MATERIALS

A. Di Vincenzo,[a]* E. Madonia,[b] P. Conte.[b] D. Chillura Martino,[a] P. Lo Meo,[a]

[a]University of Palermo, Dept. of Biological, Chemical and Pharmaceutical Sciences and Technologies – V.le Delle Scienze ed. 17, Palermo, Italy.
[b]University of Palermo, Dept. of Agricoltural, Forestry and Food Sciences – V.le Delle Scienze ed. 4, Palermo, Italy.

*E-mail: antonella.divincenzo@unipa.it

Fast-Field-Cycling NMR relaxometric experiments were carried out on a set of diversely structured cyclodextrin-based nanosponges (NSs) [1-3], in order to clarify the microscopic and textural properties of these materials, and in particular the functional mobility of an aqueous medium within their pore network. Indeed, the features of NSs can be largely tuned by changing both the reactants nature and combination ratio, and even the synthetic protocol used. A recently proposed heuristic analysis of the NMRD dispersion curves [3,4] allowed to identify the characteristics dynamic of the system. The results obtained, in turn, were used for aiding the rationalization of a dataset pertaining to the adsorption and the controlled release kinetics of a suitable of *p*-nitroaniline, chosen as model guest. This led us to put forward a cute "bunny-hop-like" model to rationalize their release properties.



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