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NMR Crystallography: a tool for the characterization of microporous hybrid solids.

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Abstract.

Solid-state nuclear magnetic resonance (SSNMR) spectroscopy has gradually become a necessary tool for the elucidation of the long and short range orders in microporous solids like zeolites and metal-organic frameworks (MOFs), very often in complement to other analytical or computational techniques. In this class of materials, potentially having high surface area, a deep analysis of the interfaces, that SSNMR can provide, is key to better understand their properties. In this short review, recent examples and applications have been chosen in which SSNMR allowed the characterization of zeolites, metal-organic frameworks (MOFs), and other siliceous materials that serve as platforms for drug delivery. The input of SSNMR in each study is detailed and discussed.

Introduction.

The permanent porosity in the structure of the microporous solids that are zeolites and metal-organic frameworks (MOFs) confers them a variety of unique and original properties that the corresponding bulk solids may not have, hence the enthusiasm of a growing number of research groups to explore applications in the

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