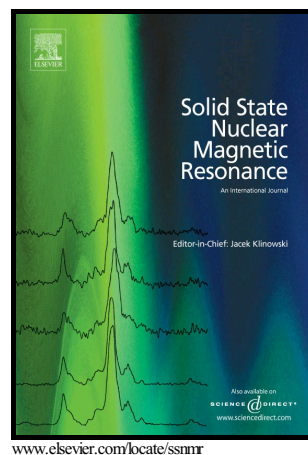


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^{27}Al - ^{27}Al double-quantum single-quantum MAS NMR: applications to the structural characterization of microporous materials.

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Abstract.

In this paper, we review and illustrate applications, reported in the literature or used in our group, of ^{27}Al - ^{27}Al double-quantum single-quantum (DQ-SQ) MAS NMR experiments for the structural characterization of Al-containing microporous solids, namely zeolites, aluminophosphates and metal-organic frameworks. Information regarding the periodic frameworks or the localization of the various aluminum species in the materials are obtained from the analysis of the two-dimensional NMR spectra, which allows getting local structural details sometimes inaccessible from other characterization technique. An application of ^{27}Al - ^{27}Al of the DQ-SQ experiment for the detection of aluminum pairing in zeolite is shown.

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