Title:	Analytic Theory of Multiple-Quantum NMR of Quadrupolar Nuclei
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Abstract:	In this review, an analytic framework based on the concept of effective Floquet Hamiltonians is presented to describe the nuances of multiple-quantum (MQ) NMR of quadrupolar nuclei in static solids. Employing spin I = 3/2 as a case study, a pedagogical description of the time evolution of the coherences and populations in MQ experiments is presented through analytic expressions derived from the density operator formalism. From an experimental perspective, the conditions required for optimal implementation of the various stages involved in MQ experiments are identified and explained in terms of effective Floquet Hamiltonians. Additionally, the role of experimental parameters (such as duration of pulse, amplitude of the pulse, etc.,) in the derivation of effective Hamiltonians is discussed in detail. The analytic framework presented in the present study is quite general and is extendable to describe other quadrupolar spins in the periodic table.
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