Title:	Chapter 2: Homonuclear Cross-relaxation and Cross-correlation in Small Molecules and in Soft Matter
Authors:	Dorai, K. (/jspui/browse?type=author&value=Dorai%2C+K.)
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Abstract:	This chapter describes spin relaxation experiments on small or medium-sized molecules or in soft matter, with a handy overview of the possible experimental schemes, along with their advantages and limitations. The chapter begins with a description of several one-dimensional (1D) and two-dimensional (2D) nuclear Overhauser effect (NOE) and rotating-frame Overhauser enhancement (ROE) cross-relaxation sequences and gives examples of several interesting applications. Cross-correlation experiments are then described, starting with 1D and 2D longitudinal and transverse cross-correlations, experimental dynamic frequency shifts, cross-correlations in paramagnetic and quadrupolar systems, underlying motional models and concluding with a section on the wealth of information about structure, conformation and dynamics that can be obtained using these experiments. A highlight of this chapter is the organization of the cross-correlated pulse sequences according to the type of cross-correlations being explored. This helps the reader to explore connections amongst these related experiments, from a phenomenological perspective. This chapter will interest researchers who are looking for a broad-based overview of experimental research in the area of NMR cross-relaxation and cross-correlation. NMR experimentalists who want to design the optimal cross-relaxation or cross-correlation pulse sequences, will also find this chapter useful
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