A Theoretical Application of 3D J-Resolved NMR Spectroscopy for IS_nK_m ($I = 1/2$, $S = 1/2$ and 1, $K = 3/2$) Spin Systems

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In 3D J-resolved NMR spectroscopy, the chemical shift along one axis and the spin-spin coupling parameters along the two other different axes are resolved. Product operator theory is used for the analytical description of multi-dimensional NMR experiments on weakly coupled spin systems. In this study, the product operator description of heteronuclear 3D J-resolved NMR spectroscopy of weakly coupled $IS_n K_m$ ($I = 1/2$, $S = 1/2$ and 1, $K = 3/2$) spin systems is presented.

Key words: Product Operator; 3D J-Resolved NMR; Spin-3/2.