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Five Decades of Homonuclear Dipolar Decoupling in Solid-State NMR: Status and Outlook

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Five Decades of Homonuclear Dipolar Decoupling in Solid-State NMR: Status and Outlook

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Abstract

It has been slightly more than fifty years since the first homonuclear spin decoupling scheme, Lee-Goldburg decoupling, was proposed for removing homonuclear dipolar interactions in solid-state nuclear magnetic resonance. A family of such schemes has made observation of high-resolution NMR spectra of abundant spins possible in various applications in solid state. This review outlines the strategies used in this field and the future prospects of homonuclear spin decoupling in solid-state NMR.

Keywords: Solid-state NMR; Homonuclear decoupling; Lee-Goldburg; PMLG; DUMBO; Magic-angle spinning; ¹H resolution

Contents

1	Introduction	1
2	Classification of Homonuclear Dipolar Decoupling Schemes	3
3	Lee-Goldburg Based Pulse Schemes	4
4	Phase-Modulated Lee-Goldburg Scheme	7
4.1	Evolution of PMLG	7
4.2	Principle and Properties of PMLG	8
4.3	Theoretical Aspects of PMLG	10
4.4	Experimental Aspects of PMLG	14

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