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**Abstract**

The concept of hydrogen storage materials was proposed in late 1960's. Mg-based $Mg_2Cu$ and $Mg_2Ni$ are the first examples and $LaNi_5$ that works at room temperature was followed. In these early days, hydrogen storage materials are interstitial hydrides or hydrides of intermetallic compounds. Investigations on interstitial hydrides, a plenty of experimental results and empirical rules based on experiments have been reported. At the first part of this review, these achievements were briefly introduced because they are extremely suggestive for the research on non-interstitial hydrides as well as interstitial hydrides. In the later part, recent progress on interstitial hydrides and Mg based hydrides and their applications were briefly reviewed.