Presenting high solar energy conversion efficiencies\textsuperscript{1,2} (21%), Hybrid Perovskite APbX\textsubscript{3} (A is a small organic cation, X=Cl, Br, I) have recently become one of the most promising compound in the field of photovoltaic devices.

In a first step, we will present a room temperature NMR study of three methylammonium lead halides, namely MAPbX\textsubscript{3} (MA=CH\textsubscript{3}NH\textsubscript{3}). Investigation of the organic part confirms the isotropic mobility of the methylammonium cations while the structure of the inorganic part is confirmed by \textsuperscript{207}Pb NMR. Several years ago, R.E. Wasylishen \textit{et al.}\textsuperscript{3} had already revealed the interest of deuterium NMR to investigate the temperature behaviour and the dynamics operating in such materials in their isotropic phase. Thus, in a second step we will focus on CH\textsubscript{3}ND\textsubscript{3}PbBr\textsubscript{3} in the anisotropic dynamic regime. By using a homemade probehead, we can discuss on the dynamical behaviour of the inorganic part of such hybrid perovskites, which can be further rationalized based on appropriate theoretical approaches\textsuperscript{4}.


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