

Muon Spin Relaxation Study on Quantum Spin Liquid

Candidate $\text{H}_3\text{LiIr}_2\text{O}_6$

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We present the muon spin relaxation (μSR) results of the honeycomb lattice $\text{H}_3\text{LiIr}_2\text{O}_6$ which is supposed to hold quantum spin liquid (QSL) state based on Kitaev model. Zero field (ZF) μSR data indicate the absence of both magnetic order and spin freezing down to 0.08 K. We carry out longitudinal field (LF) μSR experiments to exclude the effect of nuclear magnetic moments. The temperature-independent plateaus of muon spin relaxation rates found in ZF/LF- μSR suggest the formation of QSL state in $\text{H}_3\text{LiIr}_2\text{O}_6$.