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**Frustrated Iridates as Candidate Quantum Spin Liquids**

It has long been recognized that strong quantum fluctuations may inhibit long range magnetic ordering and give rise to a paramagnetic ground state. A special class of quantum paramagnets, known as quantum spin liquids (QSL), have been attracting tremendous theoretical and experimental attention.

While materials like Li$_2$IrO$_3$ and Na$_2$IrO$_3$ were experimentally found to order magnetically at low temperatures, the recently synthesized H$_3$LiIr$_2$O$_6$ does not show any magnetic ordering down to 1K and therefore represents a promising candidate for a topological QSL.

To clarify the reasons why a QSL behavior can be stabilized in H$_3$LiIr$_2$O$_6$, a detailed structural, magnetic and electronic understanding of the aforementioned iridates is necessary.