

# Optimal anti-ferromagnets for light dark matter detection

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We argue that anti-ferromagnets (in particular, nickel oxide) are optimal targets to look for sub-MeV dark matter with spin-dependent interactions. We show how they can potentially be sensitive to dark matter as light as the keV, with nickel oxide performing an order of magnitude better than all other compounds. We also show how a powerful theoretical tool to approach this problem is that of effective field theories for spontaneously broken spacetime symmetries.

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