

## Supplementary materials: The influence of $\text{Ho}^{3+}$ doping on $^{13}\text{C}$ DNP in the presence of BDPA

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### Supplementary Figures:

Supplementary Figure S1:

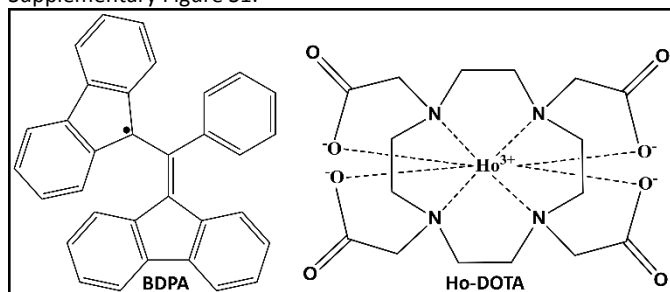


Figure S1. Structures of the BDPA and Ho-DOTA complex discussed in this work

Supplementary Figure S2:

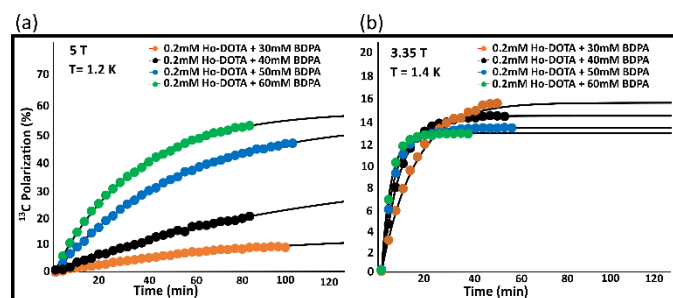


Figure S2.  $^{13}\text{C}$  DNP polarization as a function of irradiation time for 25  $\mu\text{l}$  of 1:1 (v/v) sulfolane/ $[1-^{13}\text{C}]$ pyruvic acid in the presence of various concentrations of BDPA radical with 0.2 mM Ho-DOTA for a) at 5 T and b) 3.35 T. The samples were polarized at the positive polarization peak with a 100 mW microwave source. At 5 T, the sample consisting 60 mM BDPA doped with 0.2 mM of Ho-DOTA shows higher solid-state polarization, whereas at 3.35 T the 30 mM BDPA doped with 0.2 mM of Ho-DOTA produced the highest polarization.