Electronic Supplementary Information for Dalton Transactions


# Supporting Information

# For

# Chelating tris(amidate) ligands: versatile scaffolds for nickel(II)

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## Table of Contents

**Figure S1.** Cyclic voltammogram of $[Et_4N]_2[Ni(L^{iPr})(CN)]$ recorded in DMF (0.2 M tetrabutylammonium hexafluorophosphate $TBAPF_6$). Scan rate 50 mV/sec (vs. $Fc/Fc^+$).

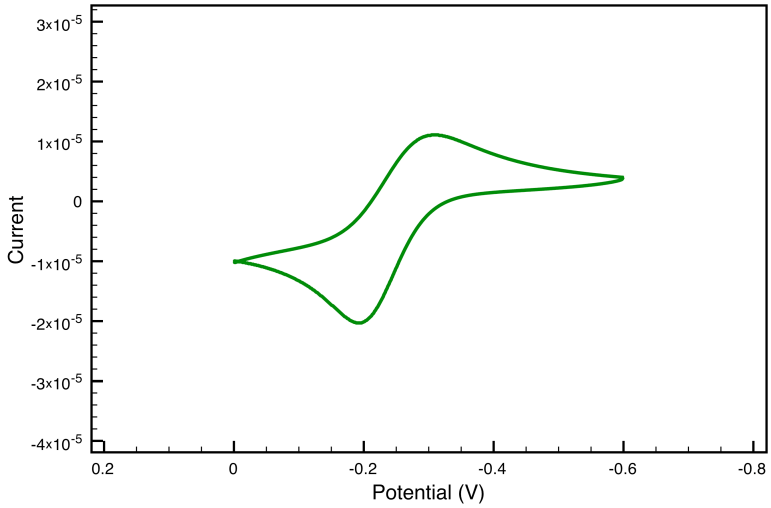


**Figure S2.** Temperature dependence of the magnetic susceptibility for $[Ph_4P[Ni(L^{iPr})]$ obtained with an applied field of 0.1 T (circles). Best fits to the data (red line) give $g$ = 2.354, $D$ = –19.44 $cm^{-1}$, $E$ = –1.46 $cm^{-1}$, TIP = 808 × $10^{-6}$ emu·$mol^{-1}$, and relative error f = 0.018. Inset: Magnetization of $Ph_4P[Ni(L^{iPr})]$ as a function of reduced magnetic field.

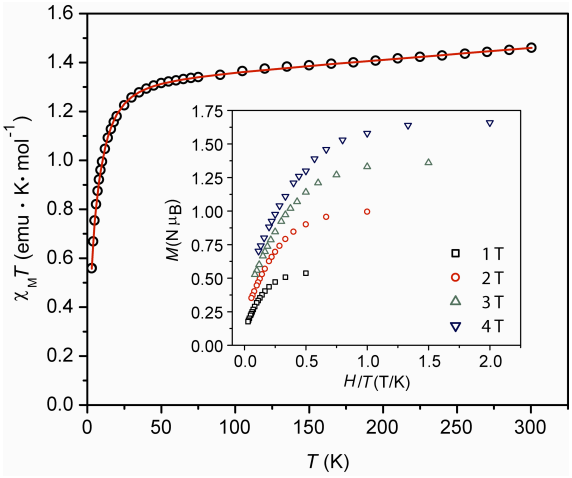

**Figure S3.** Low temperature expansion of magnetic susceptibility of $[Et_4N]_3[CoNi(L^{iPr})_2(\mu_2\text{-}CN)]$ collected at various fields.

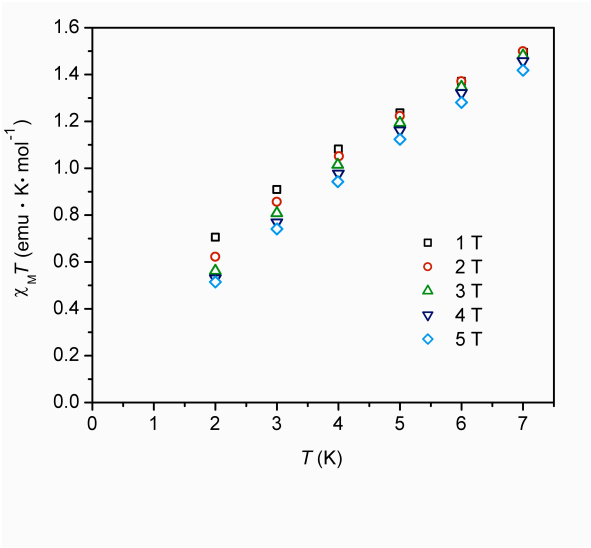


**Figure S4.** Magnetic susceptibility of $[Et_4N]_3[CoNi(L^{iPr})_2(\mu_2\text{-}CN)]$ (circles) measured with an applied field of 0.1 T. The fit (red line) was obtained with $D$ fixed at 10 cm$^{-1}$. $J$ = –1.56 cm$^{-1}$, $g$ = 2.12, $D$ = 10 cm$^{-1}$ (fixed), TIP = 6.87 ×10$^{-3}$ emu·mol$^{-1}$, f = 0.10.

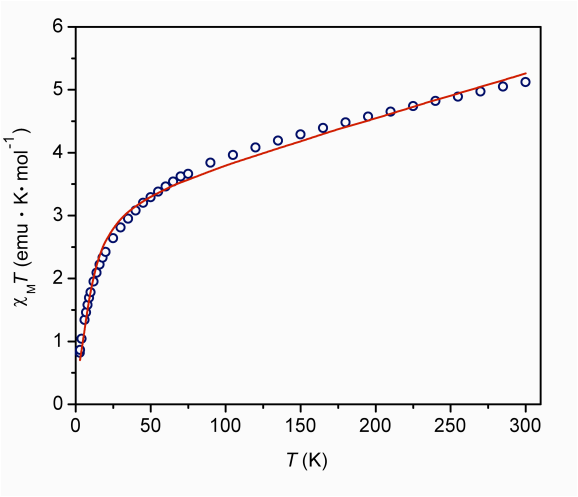

**Figure S5.** Magnetic susceptibility of $[Et_4N]_3[CoNi(L^{iPr})_2(\mu_2\text{-}CN)]$ (circles) measured with an aaplied field of 0.1 T. The fit (red line) was obtained with $D$ allowed to refine freely. $J = -1.49$ cm$^{-1}$, $g = 2.17$, $D = 20$ cm$^{-1}$, TIP = $6.21 \times 10^{-3}$ emu·mol$^{-1}$, f = 0.067.