

Supporting Information for  
**Hydrogen-bond Assisted Co-crystallization of a Bimetallic  $\text{Mn}^{\text{III}}_2\text{Ni}^{\text{II}}_2$   
Cluster and a  $\text{Ni}^{\text{II}}_2$  Cluster unit: Synthesis, Structure, Spectroscopy and  
Magnetism**

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Gamez,<sup>[a]</sup> and Jan Reedijk\*<sup>[a]</sup>**

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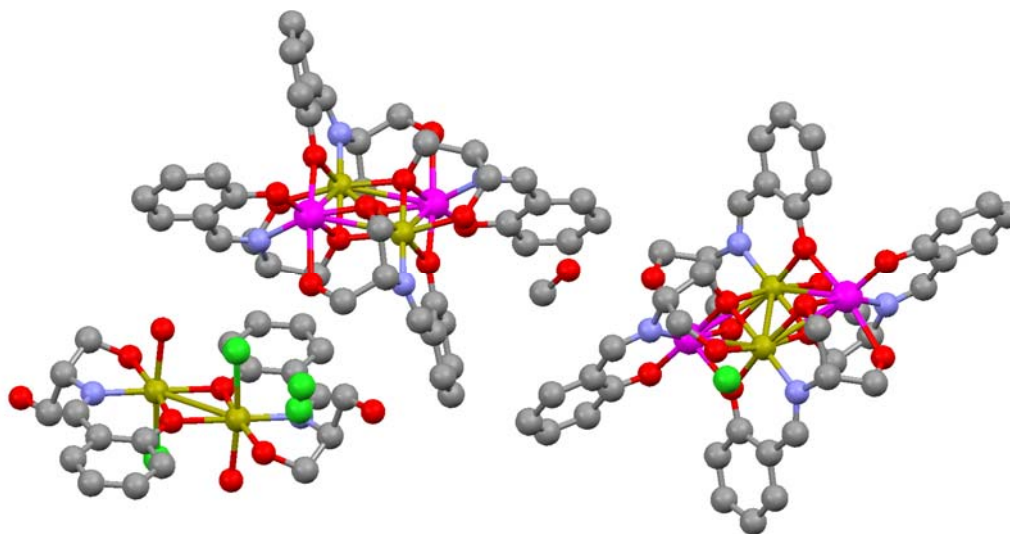
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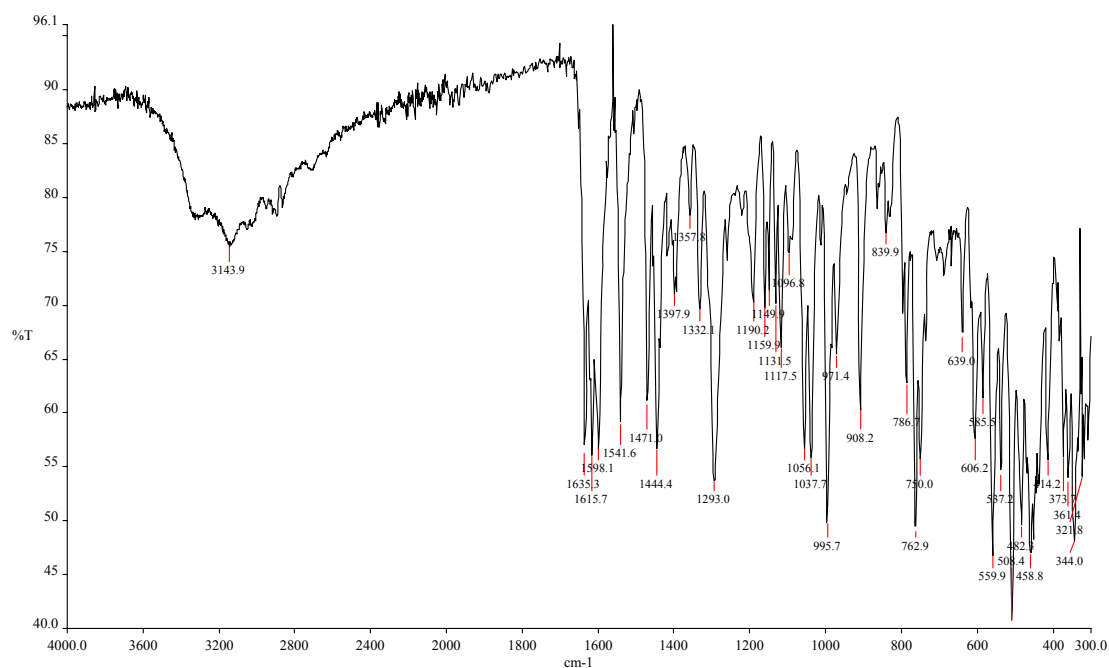
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**List of Contents:**

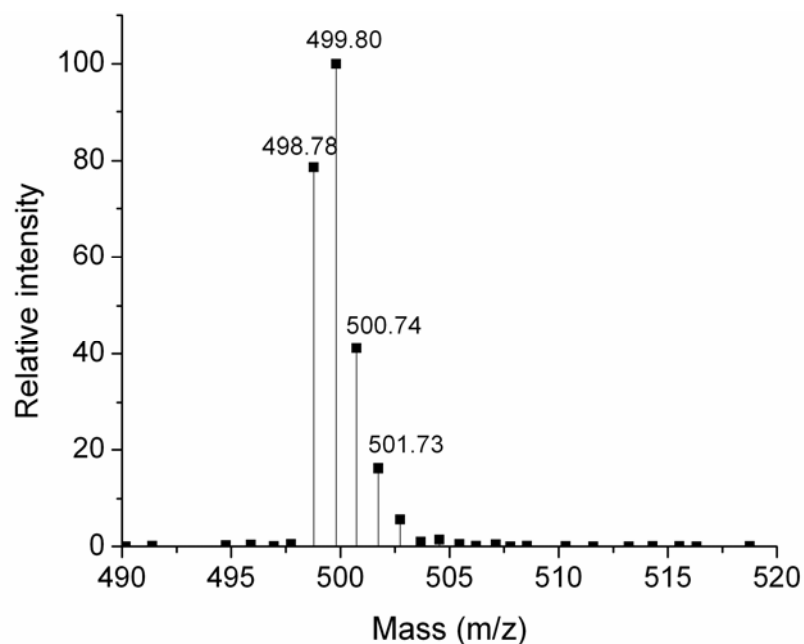
1. **Figure S1:** An X-ray crystallographic view of compound **1** with two structurally similar  $[\text{Mn}_2\text{Ni}_2]$  units and a  $[\text{Ni}_2]$  unit.
2. **Figure S2:** The IR spectra of compound **1**.
3. **Figure S3:** The ESI-MS spectroscopy showing the isotopic mass fragments for the tetranuclear unit of compound **1**.
4. **Figure S4:** Ligand-field spectrum of compound **1** with assigned transition bands.
5. **Figure S5:** Isothermal magnetization plot for compound **1**.



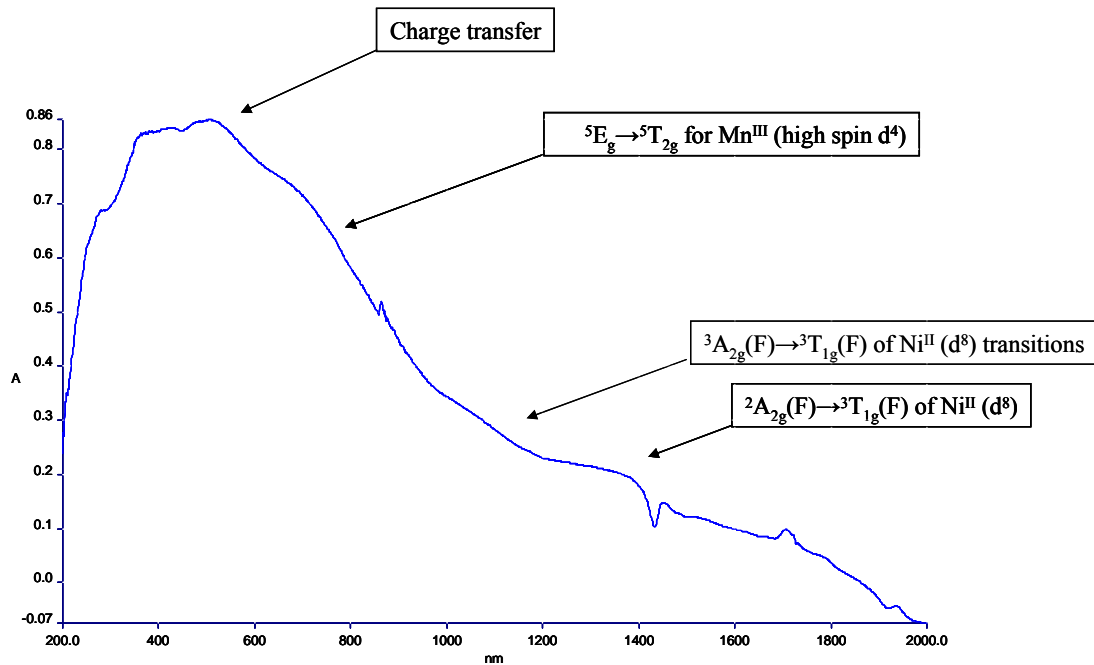
**Figure S1:** An X-ray crystallographic view of compound **1** with two structurally similar [Mn<sub>2</sub>Ni<sub>2</sub>] units and a [Ni<sub>2</sub>] unit. Hydrogen atoms are not shown for clarity. Colour codes for atoms: blue, N; grey, C; green, Cl; dark green, Ni; red, O.



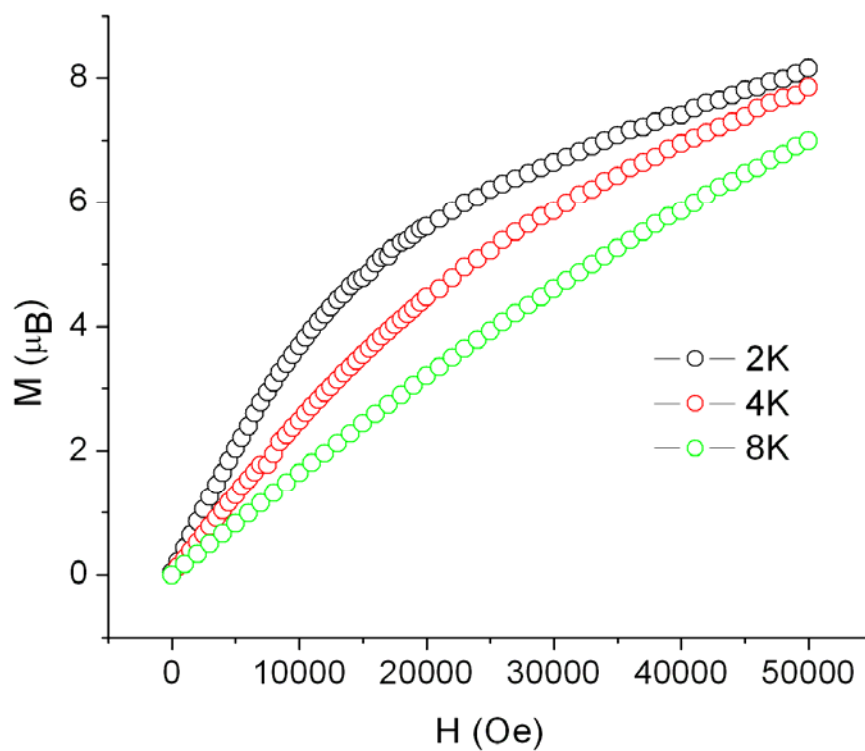
**Figure S2:** The IR spectra of compound **1**.



**Figure S3:** The ESI-MS spectroscopy showing the isotopic mass fragments for the tetranuclear unit of compound **1**.



**Figure S4:** Ligand-field spectrum of compound **1** with assigned transition bands.



**Figure S5:** Isothermal magnetization plot for compound **1**.