

Supplementary Information

Utilization of Mixtures of Aromatic N-Donor Ligands of Different Coordination Ability for the Solvothermal Synthesis of Thiostannate Containing Molecules

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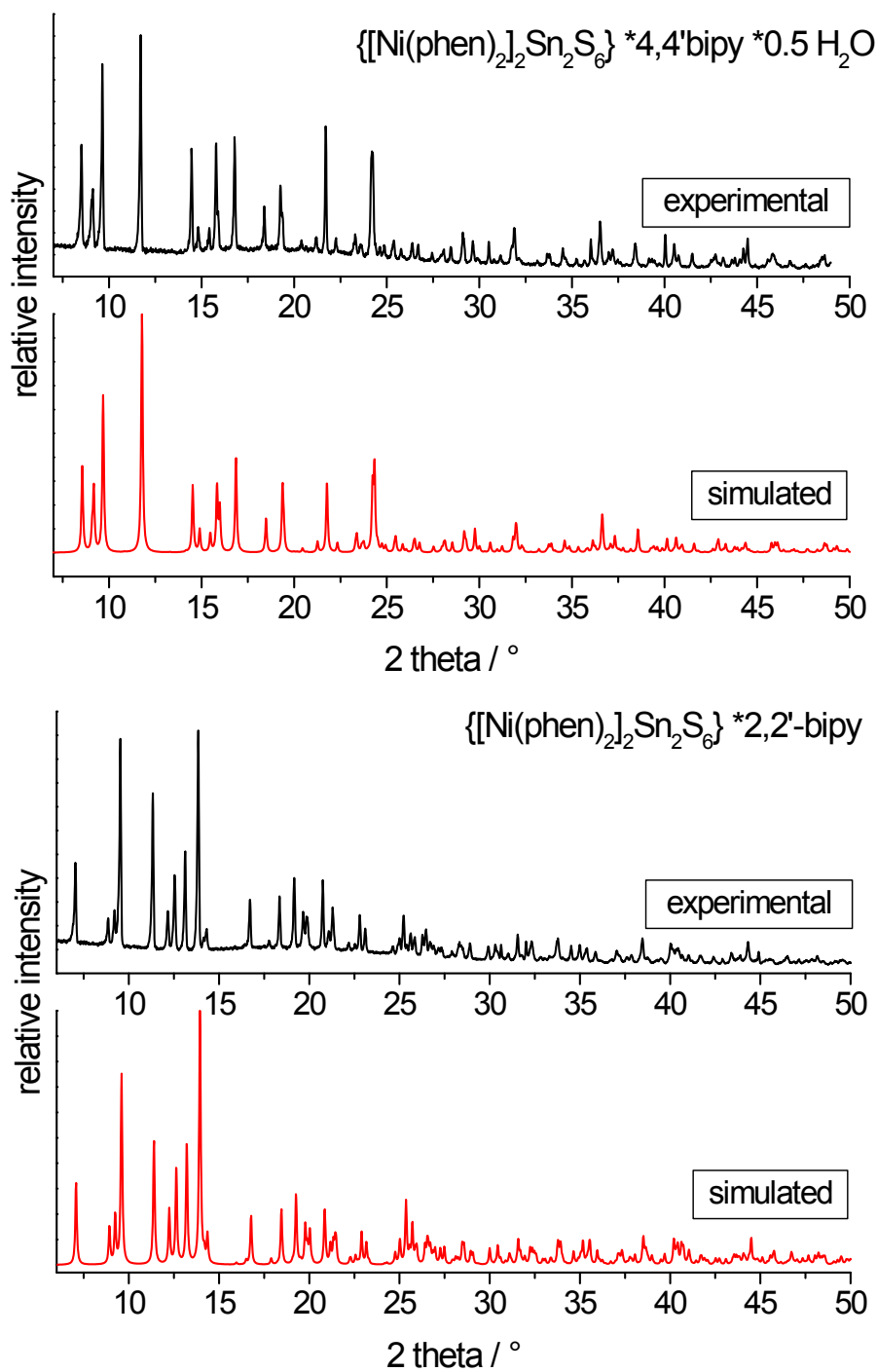


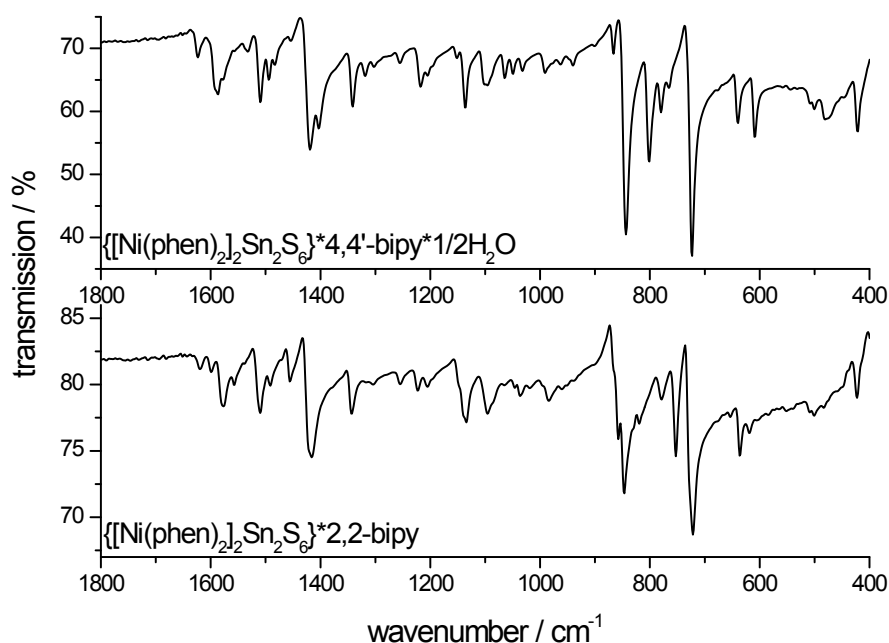
Fig. S1: Comparison of the experimental PXRD pattern of **I** (top) and **II** (bottom) with those simulated from single-crystal X-ray data.

Table S1: Selected angles ($^{\circ}$) of the octahedral Ni^{2+} environment of **I** and **II**.

I		II	
N1 ^a – Ni1 – N1	165.69(1)	N21 – Ni1 – N1	162.82(12)
N2 – Ni1 – S1 ^a	173.19(9)	N22 – Ni1 – S2	172.28(9)
N2 ^a – Ni1 – S1	173.19(9)	N2 – Ni1 – S3	172.36(8)
N1 ^a – Ni1 – N2	91.54(13)	N22 – Ni1 – N1	92.95(12)
N1 – Ni1 – N2 ^a	91.54(13)	N21 – Ni1 – N2	88.00(11)
N2 – Ni1 – N2 ^a	93.84(18)	N22 – Ni1 – N2	91.35(11)
N1 – Ni1 – N2	78.64(13)	N1 – Ni1 – N2	77.38(11)
N1 ^a – Ni1 – N2 ^a	78.64(13)	N22 – Ni1 – N22	78.25(12)
N1 ^a – Ni1 – S1 ^a	95.27(9)	N21 – Ni1 – S2	94.11(9)
N1 – Ni1 – S1 ^a	94.64(9)	N2 – Ni1 – S2	89.46(8)
N2 – Ni1 – S1 ^a	87.36(9)	N1 – Ni1 – S2	94.72(8)
N1 ^a – Ni1 – S1	94.64(9)	N21 – Ni1 – S3	99.34(8)
N1 – Ni1 – S1	95.27(9)	N22 – Ni1 – S3	88.13(9)
N2 – Ni1 – S1	87.36(9)	N1 – Ni1 – S3	95.04(8)
S1 ^a – Ni1 – S1	92.23(5)	S2 – Ni1 – S3	92.08(3)

Table S2: Dihedral angles between the phen moieties for compounds **I** and **II**.

I		II	
N2 ^a – Ni1 – N1 – C10	82.70(33)	N22 – Ni1 – N1 – C1	-88.73(33)
N2 ^a – Ni1 – N1 – C11	-96.72(26)	N22 – Ni1 – N1 – C12	92.57(24)
N2 ^a – Ni1 – N2 – C1	-90.95(33)	N22 – Ni1 – N2 – C10	88.26(32)
N2 ^a – Ni1 – N2 – C12	95.23(26)	N22 – Ni1 – N2 – C11	-95.65(24)

**Fig. S2:** IR spectra of **I** (top) and **II** (bottom).

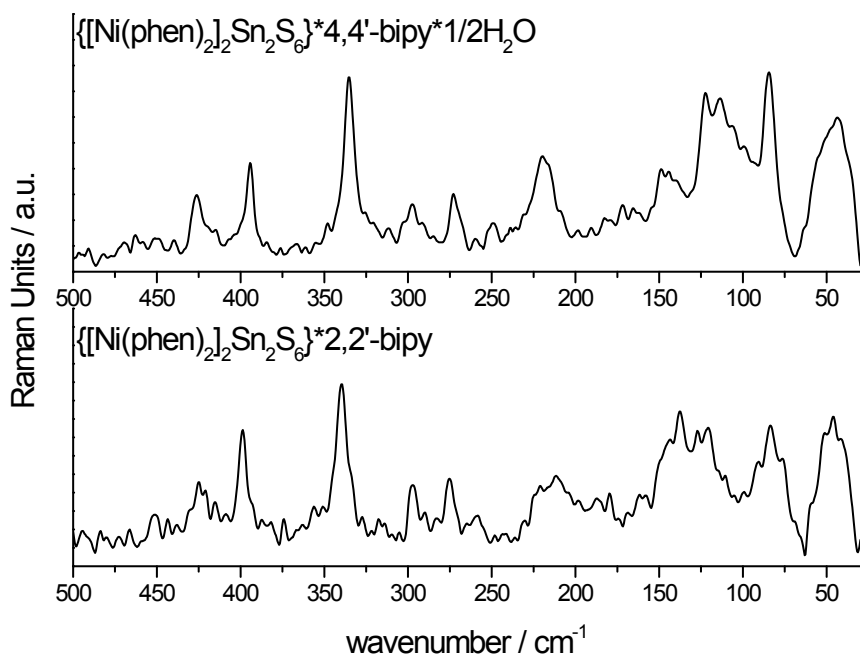


Fig. S3: Raman spectra of **I** (top) and **II** (bottom).

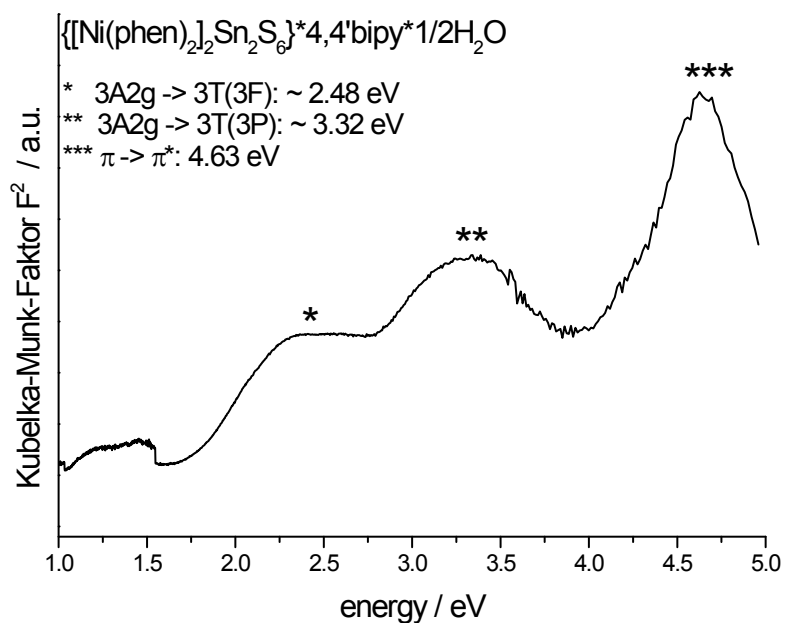


Fig. S4: UV/vis spectra of compound **I**.

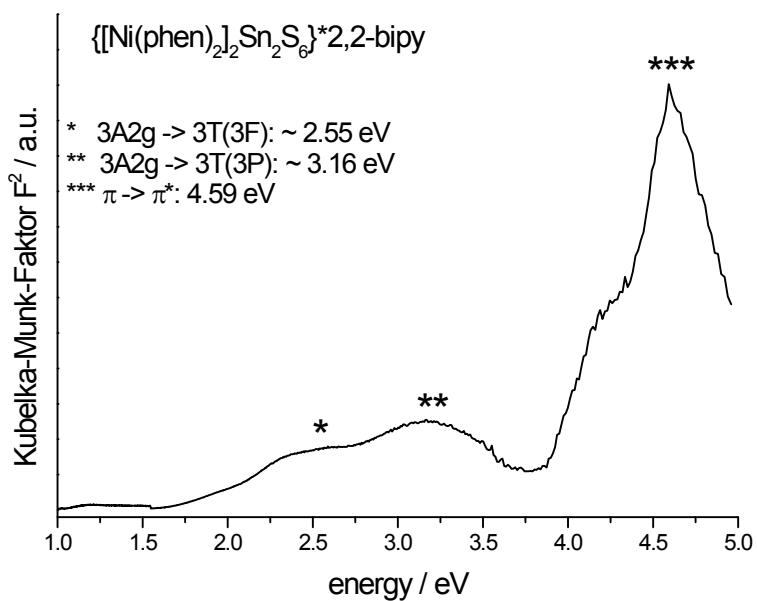


Fig. S5: UV/Vis spectra of compound **II**.

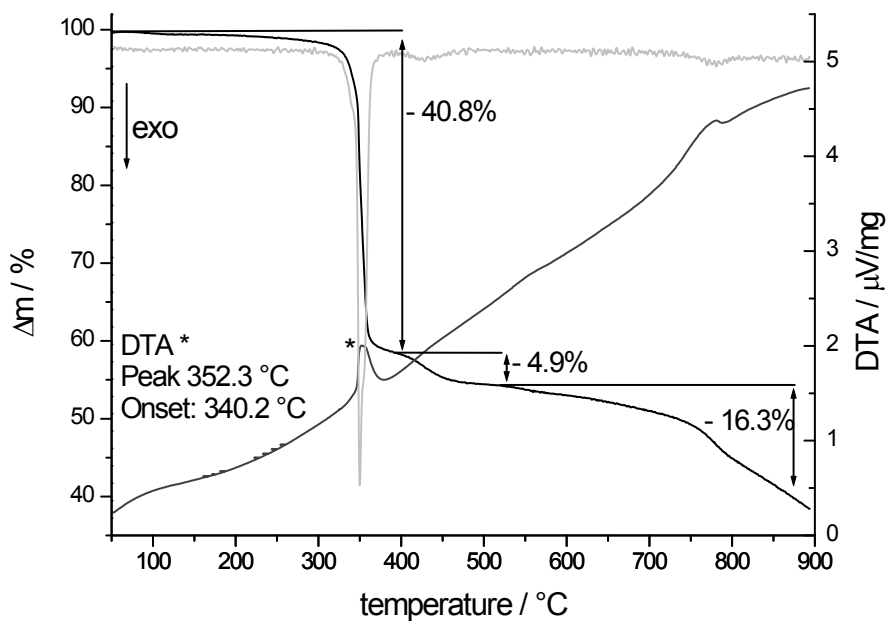


Fig. S6: DTA, TG and DTG curves for compound **I**.

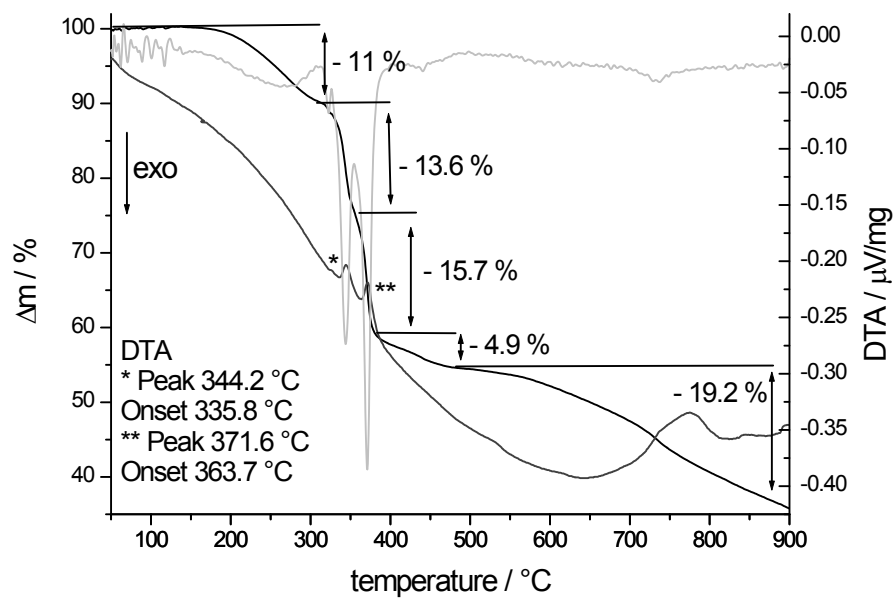


Fig. S7: DTA, TG and DTG curves for compound II.

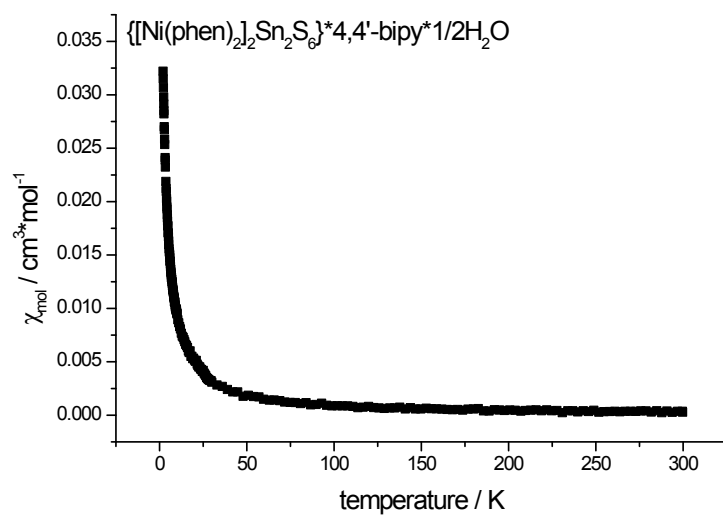


Fig. S8: Temperature dependence of the magnetic susceptibility for compound I in field of 100 Oe.

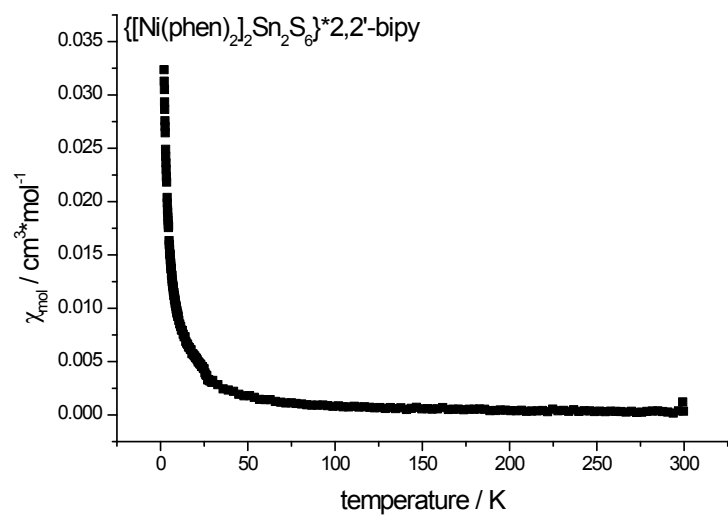


Fig. S9: Temperature dependence of the magnetic susceptibility for compound **II** in field of 100 Oe.