Electronic Supplementary Information for MS:

Reversible Solid State Structural Transformation of a Polyhapto Lead(II) Polymeric Chain to a Tetrahapto Lead(II) Two-Dimensional Network by Thermal Dehydration with no Change in Nano-plate Morphology

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Table S1 Bond lengths /Å and angles /^{o} for $[Pb(MPOAc)_2(H_2O)]_n$ (**1**).

Pb1-O3	2.450(3)
Pb1- O1	2.498(3)
Pb1- O4	2.516(3)
Pb1- O4^{i}	2.534(3)
Pb1-O2	2.545(4)
Pb1-O1W	2.724(4)
Pb1-C16	2.838(5)
Pb1^{i}- O4	2.534(3)
O3-Pb1-O1	80.07(11)
O3-Pb1-O4	52.17(11)
O1-Pb1-O4	111.78(11)
O3-Pb1-O4^{i}	70.87(11)
O1-Pb1-O4^{i}	73.26(11)
O4-Pb1-O4^{i}	118.94(7)
O3-Pb1-O2	86.22(11)
O1-Pb1-O2	51.94(11)
O4-Pb1-O2	76.47(11)
O4^{i}-Pb1-O2	123.61(11)
O3-Pb1-O1W	73.83(11)
O1-Pb1-O1W	140.19(10)
O4-Pb1-O1W	74.40(11)
O4^{i}-Pb1-O1W	70.07(10)
O2-Pb1-O1W	150.75(11)
O3-Pb1-C16	26.47(12)
O1-Pb1-C16	98.96(13)
O4-Pb1-C16	26.06(11)
O4^{i}-Pb1-C16	93.98(12)
O2-Pb1-C16	83.47(12)
O1W-Pb1-C16	69.09(12)
C8-O1-Pb1	94.0(3)
C8-O2-Pb1	91.7(3)
C16-O3-Pb1	94.1(3)
C16-O4-Pb1	91.6(3)
C16-O4-Pb1^{ii}	144.5(3)
Pb1-O4-Pb1^{ii}	116.12(13)
O4-C16-Pb1	62.4(2)
O3-C16-Pb1	59.5(2)
C15-C16-Pb1	167.8(3)
Pb1-O1W-H1W	119.6
Pb1-O1W-H2W	114.1

Symmetry operations: i: -x+1/2, y-1/2, -z+1/2 and ii: -x+1/2, y+1/2, -z+1/2.

Table S2 Bond lengths /Å and angles /^{o} for $[Pb(MPOAc)_2]_n$ (**2**).

Pb1-O1	2.409(3)
Pb1-O2	2.552(3)
Pb1-O1^{i}	2.694(3)
O1-Pb1-O1^{ii}	84.45(13)
O^{ii} -Pb1-O2^{ii}	52.13(8)
O1^{ii}-Pb1-O2^{ii}	87.73(10)
O2-Pb1-O2^{ii}	127.63(15)
O1^{i}-Pb1-O1^{iii}	66.91(10)
O1-Pb1-O1^{iii}	123.10(8)
O2^{ii}-Pb1-O1^{iii}	107.85(8)
O2^{ii}-Pb1-O1	77.60(8)
O1-Pb1-O1^{i}	66.91(10)
O1^{ii} -Pb1 -O1^{iii}	168.07(12)

Symmetry operations: i: -x, y, -z+1/2; ii: -x, -y, -z and iii: x, -y, z+1/2.

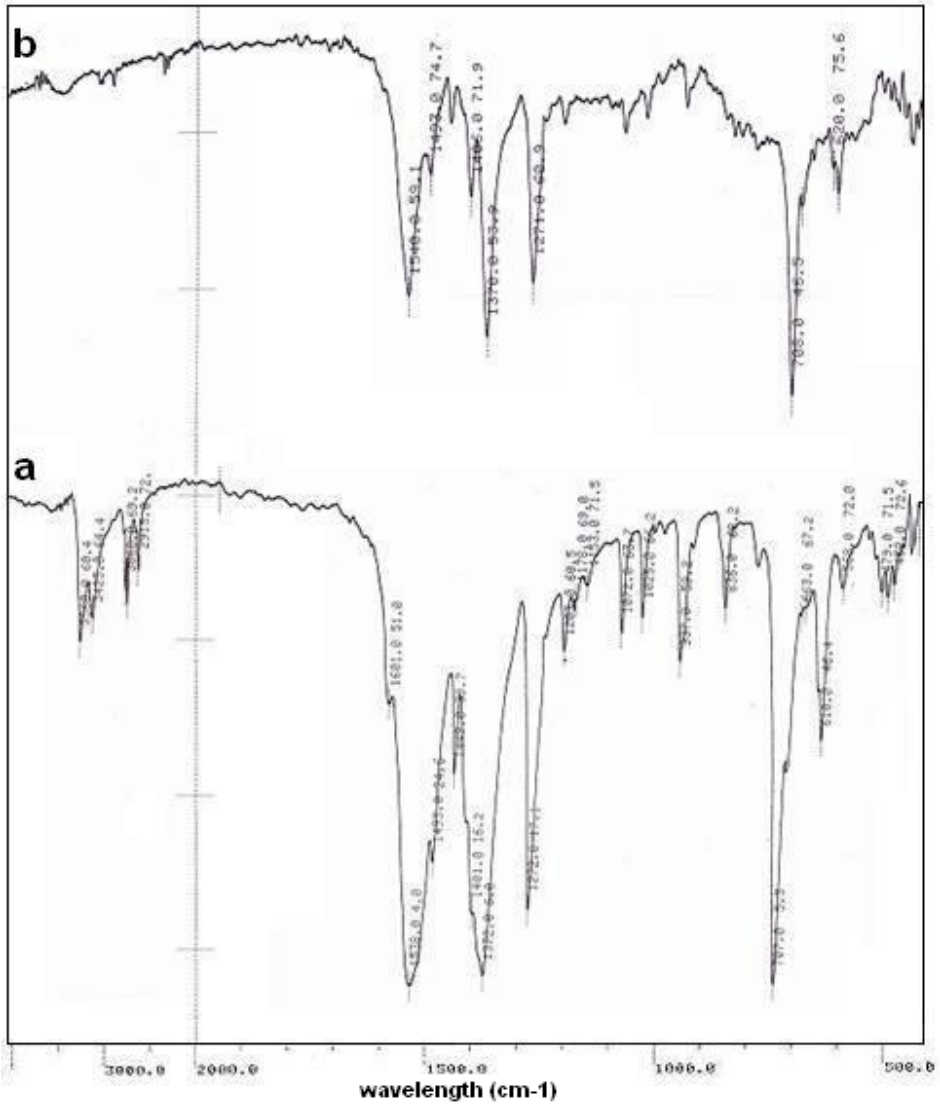

Figure S1. IR spectra of **a**) compound **1** and **b**) bulk materials obtained by heating of compound **1**.

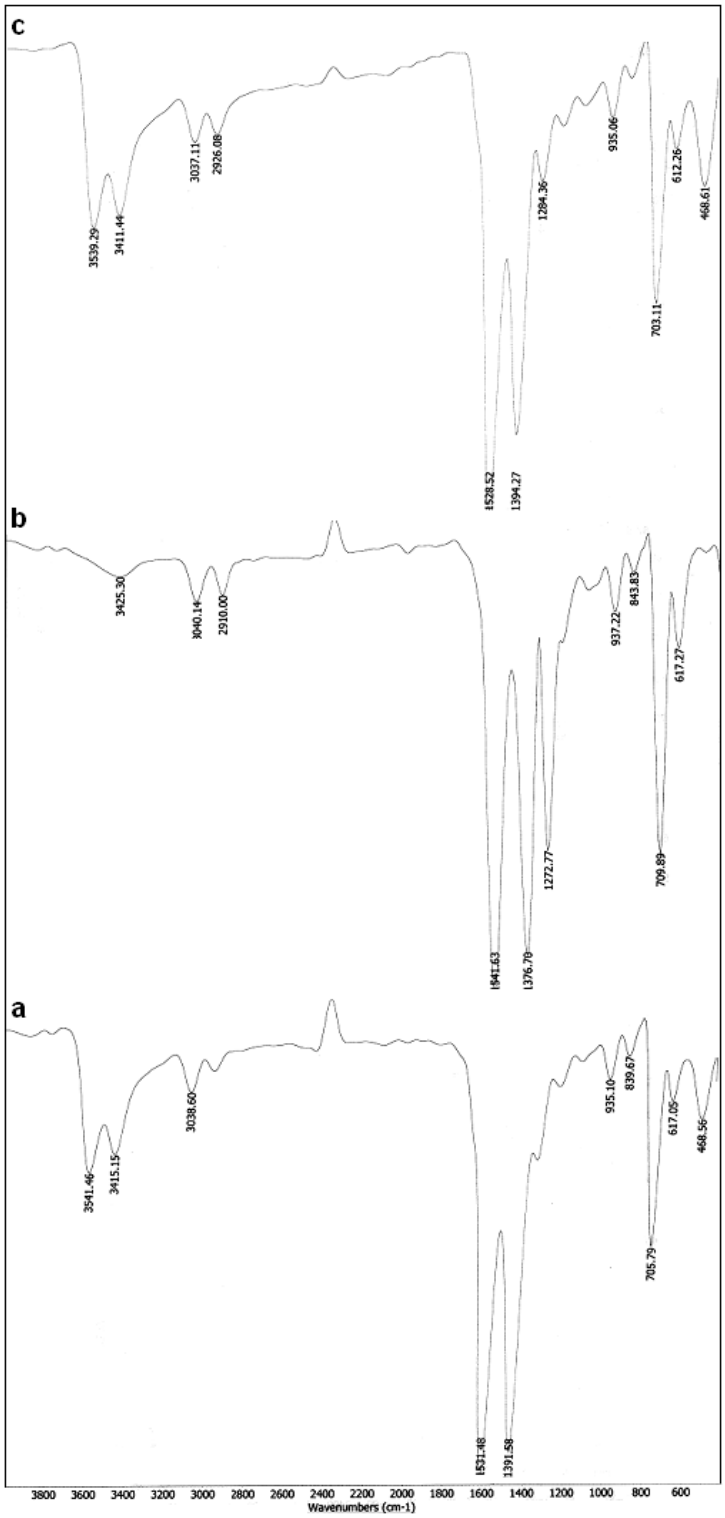

Figure S2. IR spectra of **a**) compound **1** nano-plates prepared by microwave-assisted process**, b**) compound **2** nano-plates obtained by heating of compound **1** nano-plates at 120 °C for 12 hours and **c**) the microcrystalline sample obtained from dehydrated compound **2** nano-plates under hydrothermal conditions at 165 °C for two days.