

SUPPORTING INFORMATION

Title: Ultrasound-assisted synthesis of the novel 1D Pb(II) coordination polymer with thiosemicarbazone derivative ligand and Its use for preparation of PbO nanoparticles

Author(s): Jaber Dadashi,^b Younes Hanifehpour,^{a*} Babak Mirtamizdoust,^b Mahboube Rezaei,^b Mehdi Abdolmaleki,^a Sang Woo Joo ^{c*}

^aDepartment of Chemistry, Sayyed

Jamaledin Asadabadi University, Asadabad, Iran

Email: Hanifehpour@sjau.ac.ir; m.abdolmaleki@sjau.ac.ir

^bDepartment of Chemistry, Faculty of Science, University of Qom, PO Box 37185-359, Qom, Iran

Email: babakm.tamizdoust@gmail.com;mahboubeh.rezaei1998@gmail.com

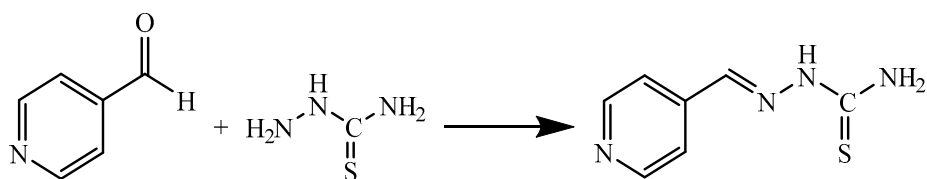
^cSchool of Mechanical Engineering, WCU Nano Research Center, Yeungnam University, Gyeongsan 712-749, South Korea

* Correspondence: Hanifehpour@sjau.ac.ir, swjoo@yu.ac.kr

Preparation of pyridine-4-carbaldehyde thiosemicarbazone ligand (L)

1.231 g of pyridine-4-carbaldehyde was dissolved in EtOH 98% in a 100 mL flask and was added one drop of acetic acid. Shortly after, was added 11.5 mmol of thiosemicarbazide little by little. As soon as the amine is added, the color of the solution changes to yellow, this shows the creation of an organic ligand. Then, the solution with stirring was refluxed for 24 hours. In the end, the crystals were filtered then rinsed by a small quantity of cold EtOH. **Scheme S1** demonstrates the L ligand.

FT-IR (KBr)= (519, 627, 996, 1063, 1109, 1448, 1359, 1593, 3262, 3422) cm^{-1}



Scheme S1. Molecular structure of Schiff base ligand.