

ELECTRONIC SUPPLEMENTARY INFORMATION

Synthesis, structure and luminescence properties of a cadmium(II)-based coordination polymer with (*S*)-4,4'-bis(4-carboxyphenyl)-2,2'-bis(diphenylphosphinoyl)-1,1'-binaphthyl as chiral linker

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1. Powder Diffraction of compound **1**

The PXRD measurements were carried out on a STOE STADI-P diffractometer in the Debye-Scherrer mode using $\text{CuK}_{\alpha 1}$ radiation ($\lambda = 154.06 \text{ pm}$). The samples for these measurements were prepared in glass capillaries (outer diameter 0.5 mm for dry sample and 0.7 mm for wet sample). The measurement were done for dry sample (sample dried at room temperature for ca. 24 h) and also for wet sample (measurement with solvent being present) to understand the influence of the solvent on the stability of the compound (structure).

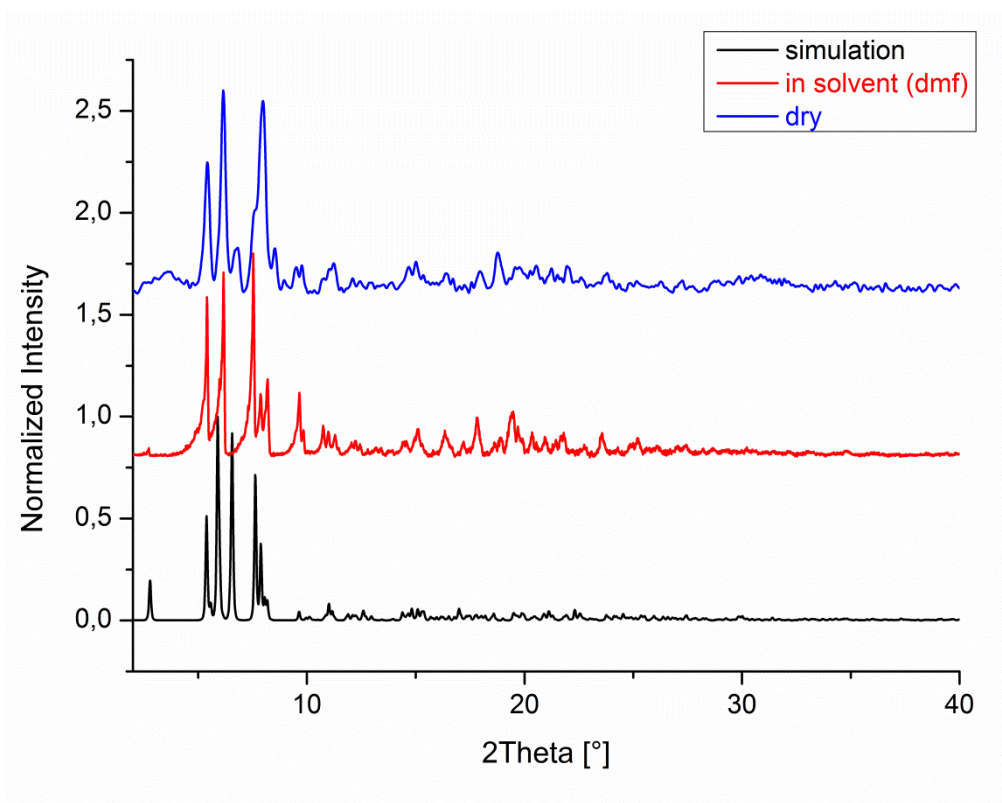


Figure S1. PXRD of compound **1**

2. DTA/TG curve of compound **1** in comparison with **H₂L**

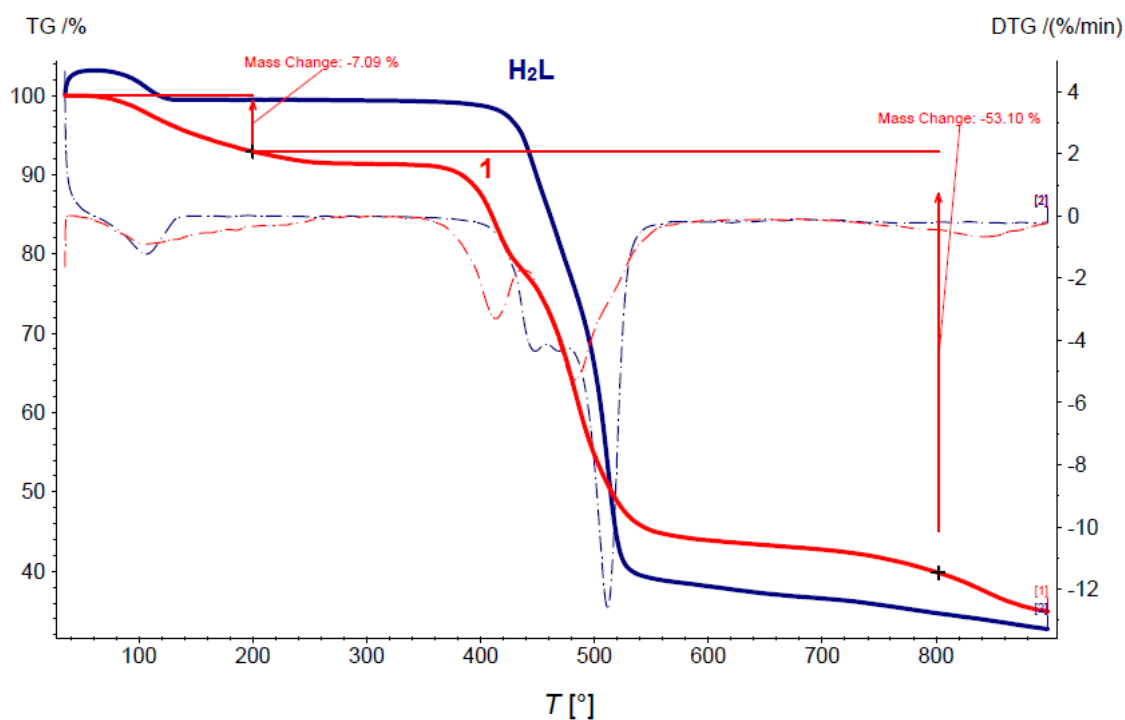


Figure S2. Thermogravimetry analysis (TG) of compound **1** and its 1st derivative (red line and red dashed line) in comparison with the TG analysis of **H₂L** (blue line and dashed blue line).

Compound **1** is thermally stable up to 400 °C. Mass loss of **1** ca 7.09% from 100-200 °C indicates loss of one water molecule and 3 dmf molecules. Gradually decomposition occurs above 400 °C up to 800 °C with an observed mass loss of ca. 53.10% (theoretically calculated 53.40%) for total decomposition.