

Figure S1. Inorganic part of compound **III**. Thermal ellipsoids are drawn at the 50% probability level.  $H_2dabco$  cations and water molecule are omitted for clarity. Only crystallographically independent atoms are labeled.

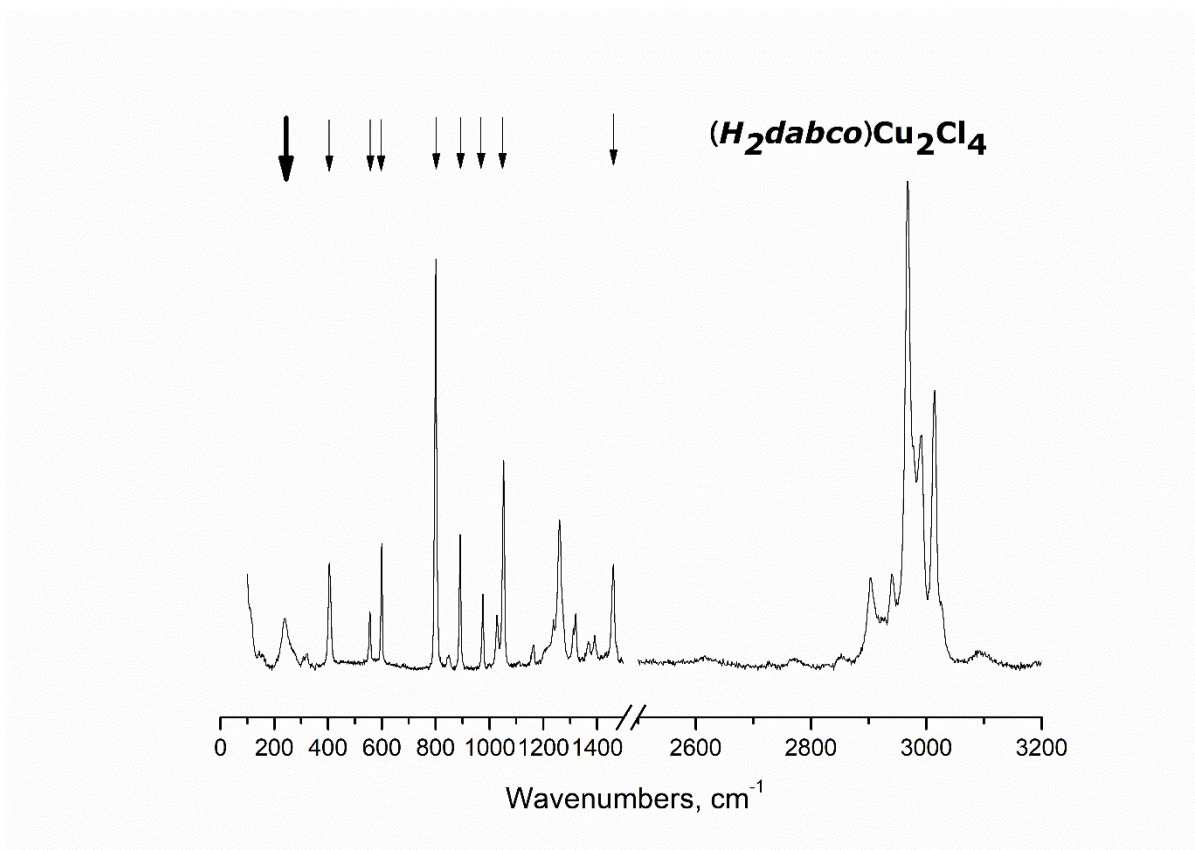


Figure S2. Raman-spectrum of  $(H_2dabco)Cu_2Cl_4$  compound. Thin arrows depict peaks originated from organic part, thick arrow marks  $\nu_5$  mode of the copper-chlorine anion.

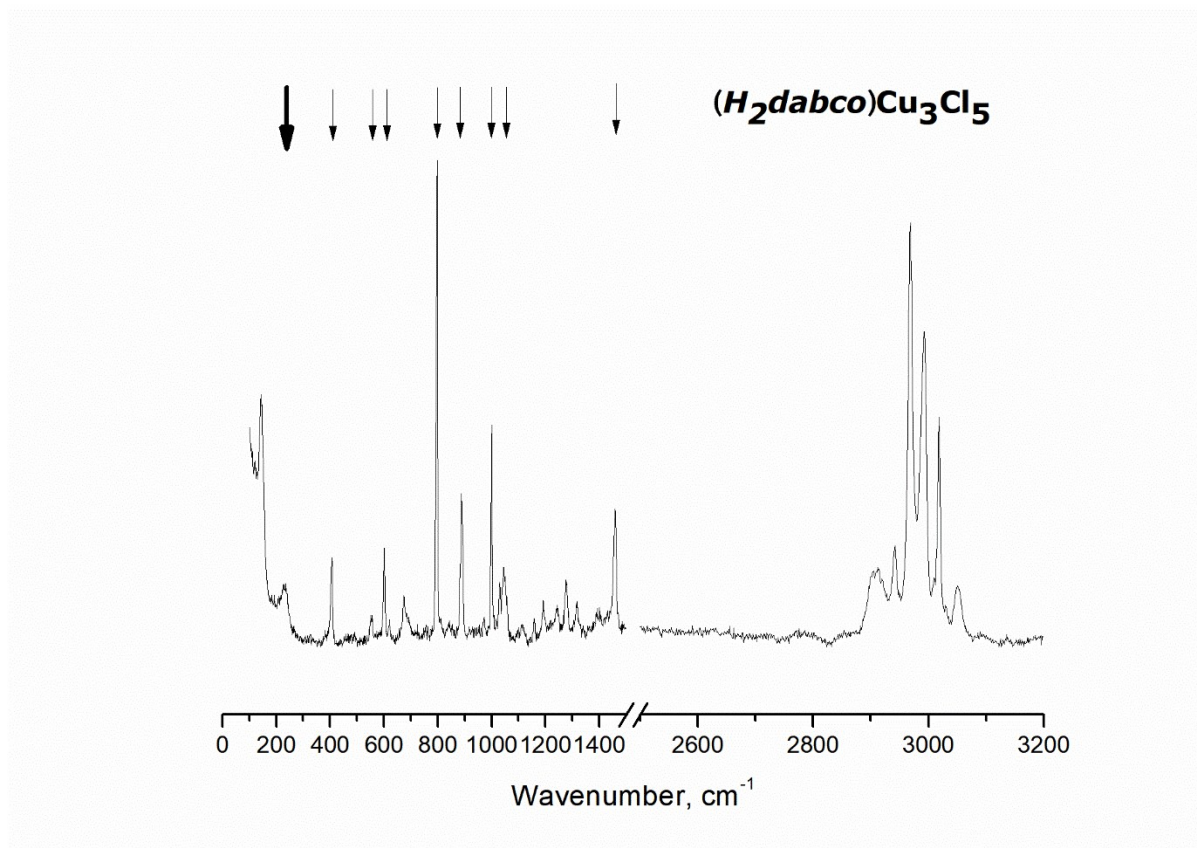


Figure S3. Raman-spectrum of  $(H_2dabco)Cu_3Cl_5$  compound. Thin arrows depict peaks originated from organic part, thick arrow marks  $\nu_5$  mode of the copper-chlorine anion.

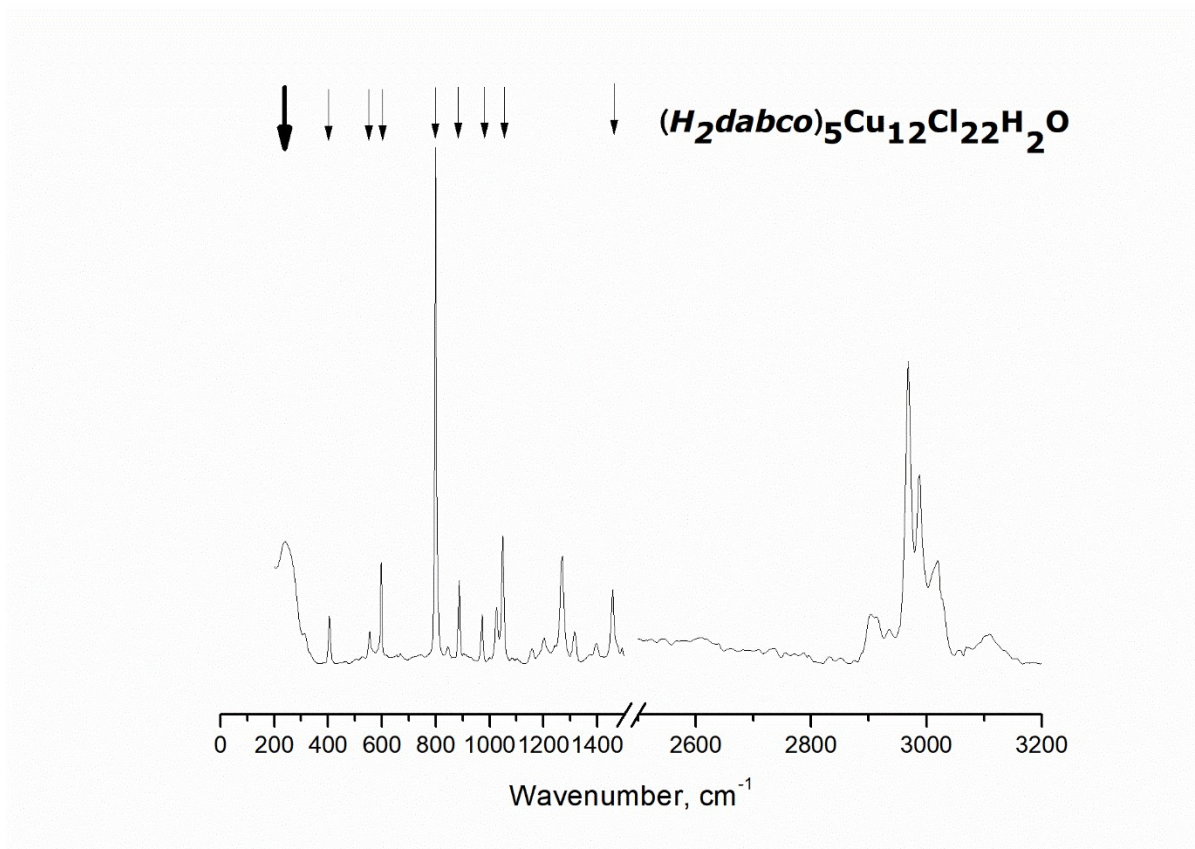


Figure S4. Raman-spectrum of  $(H_2dabco)_5Cu_{12}Cl_{22} \cdot H_2O$  compound. Thin arrows depict peaks originated from organic part, thick arrow marks  $\nu_s$  mode of the copper-chlorine anion.

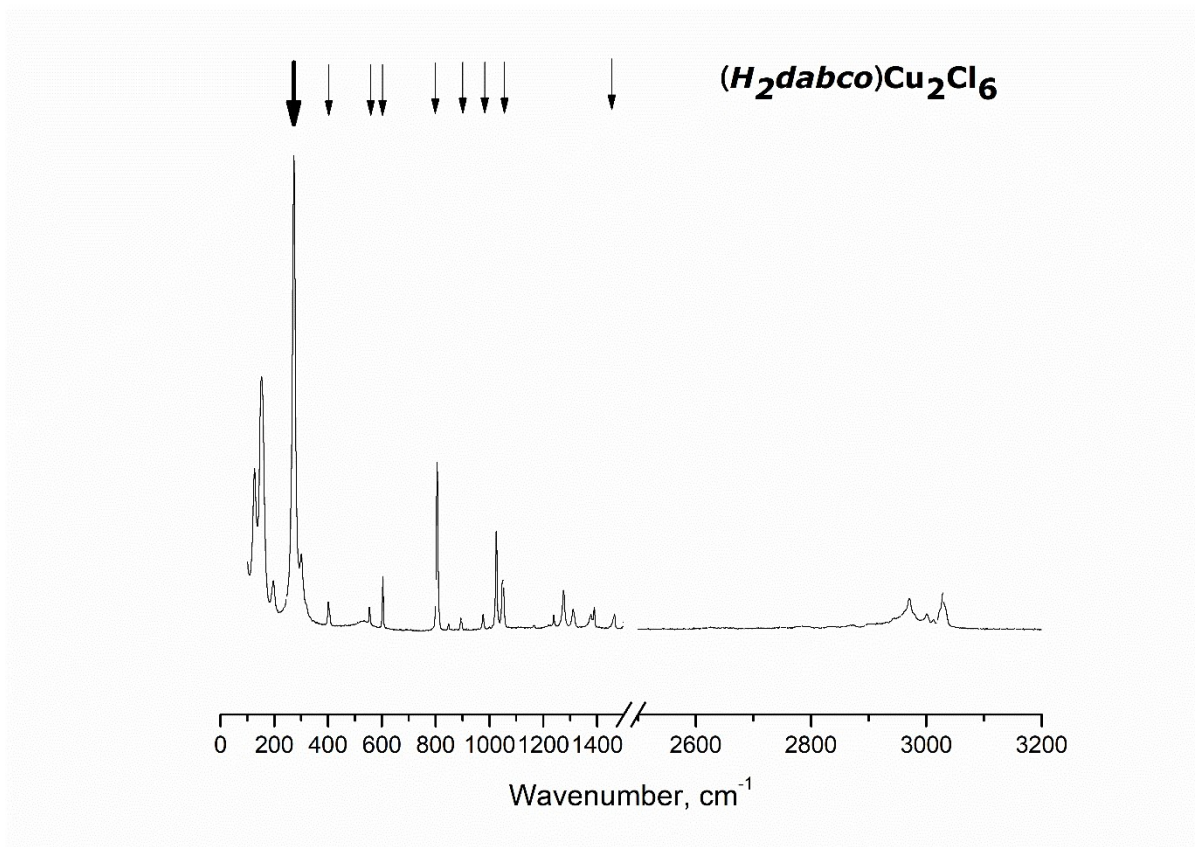


Figure S5. Raman-spectrum of  $(H_2dabco)Cu_2Cl_6$  compound. Thin arrows depict peaks originated from organic part, thick arrow marks  $\nu_s$  mode of the copper-chlorine anion.