**Supplementary Information 1**

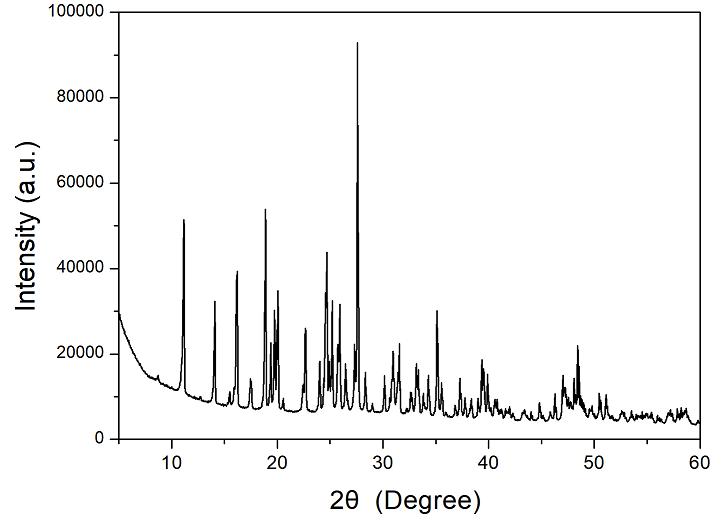


Figure. X-ray diffraction of [NH3(CH2)4NH3]ZnCl4 at 298 K

**Supplementary Information 3**

Table. Structures, lattice constants, and space groups of [NH3(CH2)*n*NH3]ZnCl4 crystals (*n*=2, 3, and 4).

Structure Lattice constants (Å) Space group

*n*=2 orthorhombic a=8.832, b=9.811, c=11.089 [23] P212121

*n*=3 monoclinic a=10.670, b=10.576, c=10.755, β=118.477° [24, 29] P21/n

*n*=4 triclinic a=7.2839, b=8.1354, c=10.4592, α=77.6527°, β=80.3358°, γ=82.8355° P1

**Supplementary Information 4**

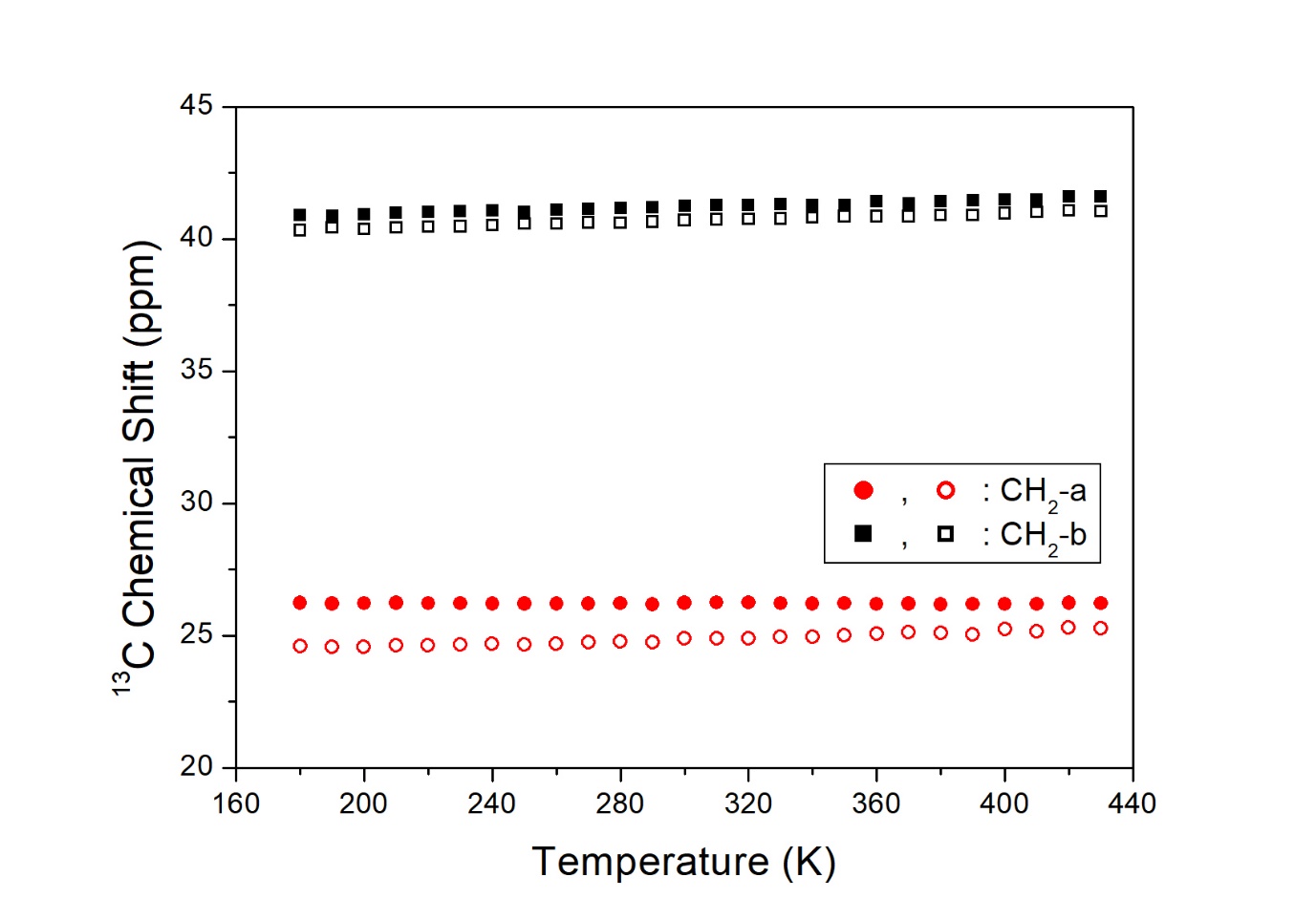


Figure. MAS 13C NMR chemical shifts of [NH3(CH2)4NH3]ZnCl4 as a function of temperature.