

Figure S1. Cell packing diagram for [Hg(TMIMA)₂](ClO₄)₂ (**1**).

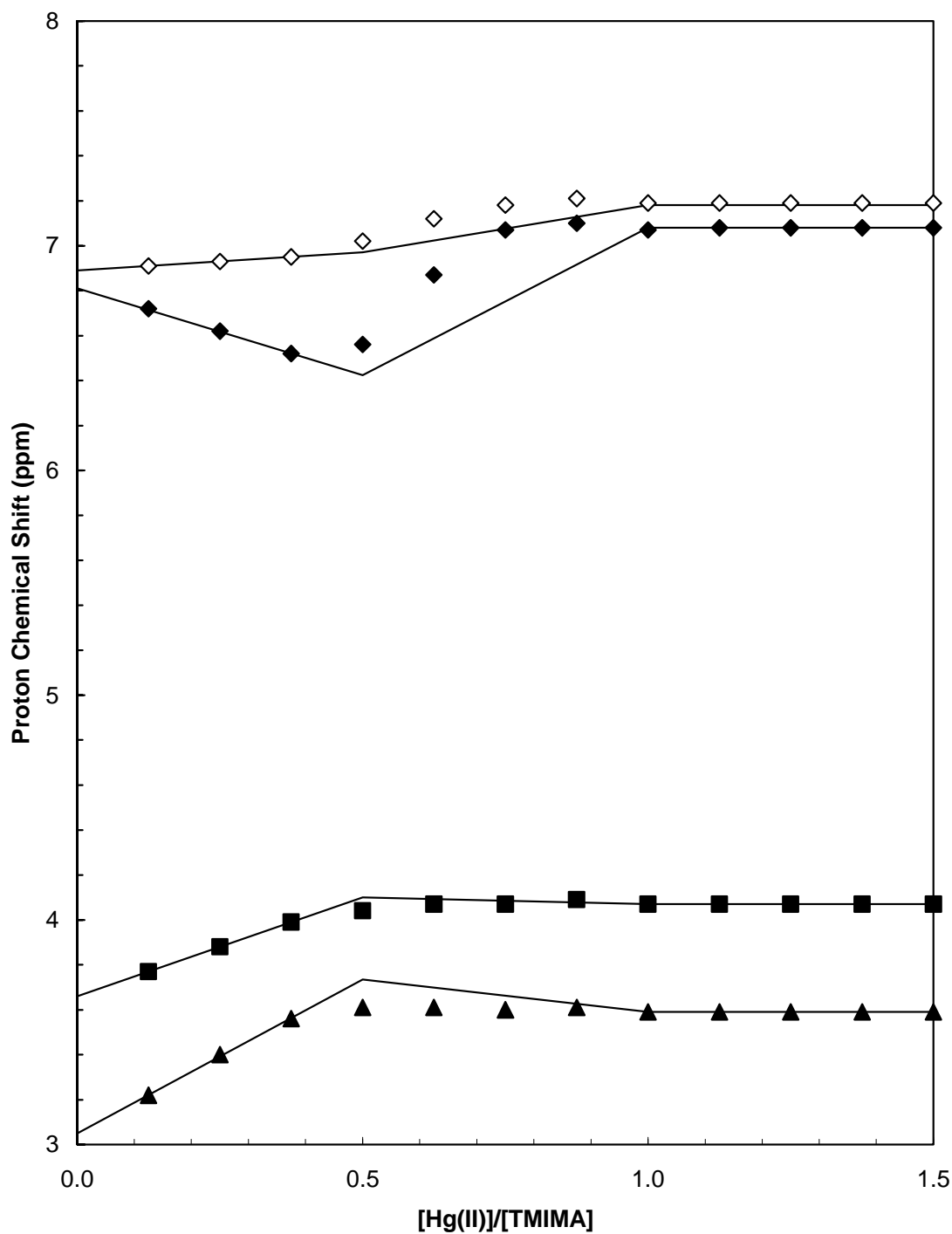


Figure S2. Chemical shifts of protons of TMIMA as a function of the nominal $\text{Hg}(\text{ClO}_4)_2$ -to-TMIMA ratio in CD_3CN at 20°C . The nominal concentration of $\text{Hg}(\text{ClO}_4)_2$ was fixed at 2 mM. The lines represent the chemical shifts expected if **1** was thermodynamically more stable than **2**, interconversion of **1** with free ligand and **2** were rapid, **2** was in slow exchange with excess metal and no other ligand containing species were formed. Deviations from these lines indicate involvement of additional metal–ligand species. Proton assignments: \blacklozenge H_a; \diamond H_b; \blacktriangle H_c; \blacksquare H_d.

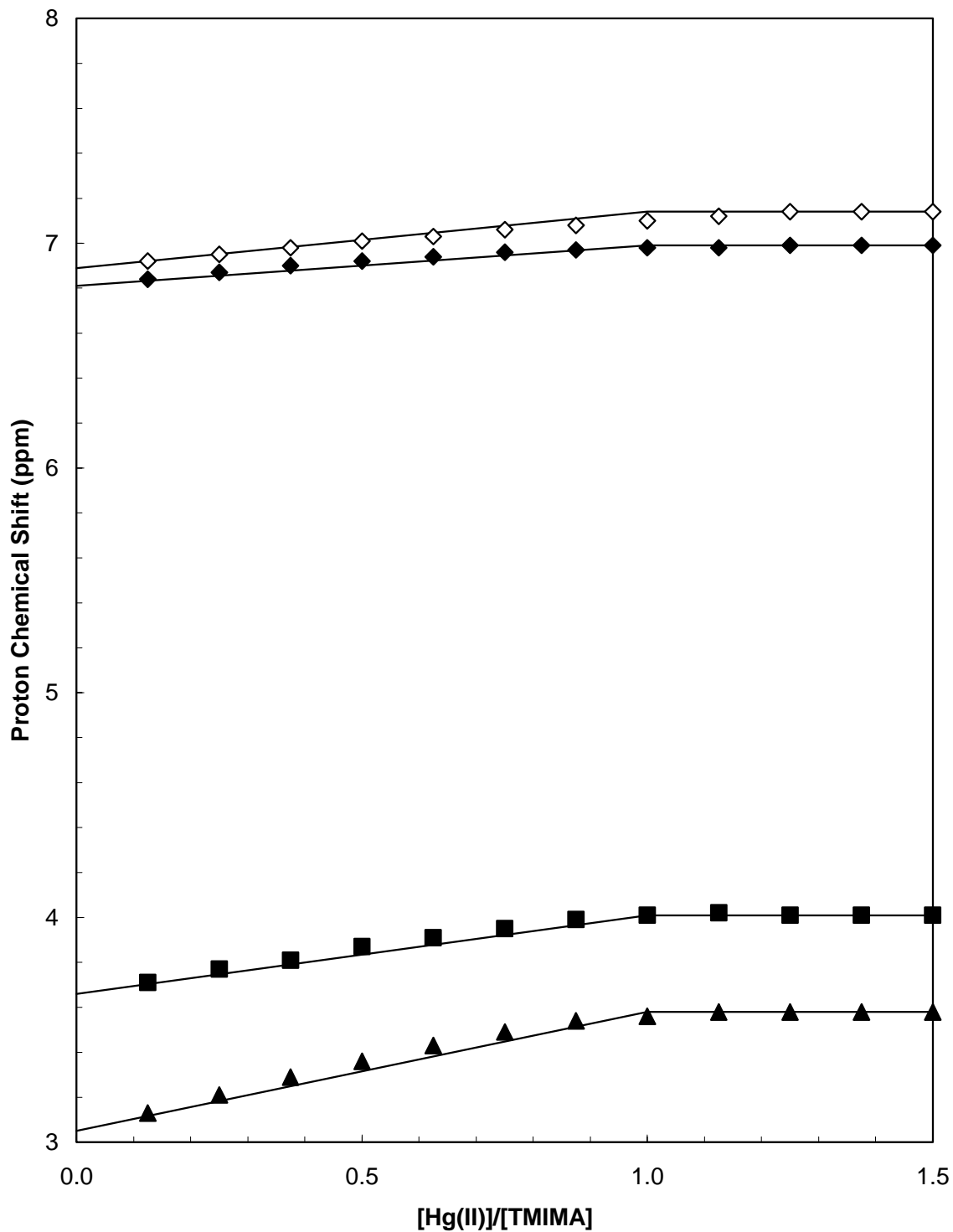


Figure S3. Chemical shifts of protons of TMIMA as a function of the nominal HgCl₂-to-TMIMA ratio in CD₃CN at 21 °C. The nominal concentration of Hg(ClO₄)₂ was fixed at 2 mM. The lines represent the chemical shifts expected if interconversion of free ligand and **3** was rapid but **3** exchanged slowly with excess metal. Proton assignments: ◆ H_a; ◇ H_b; ▲ H_c; ■ H_d.

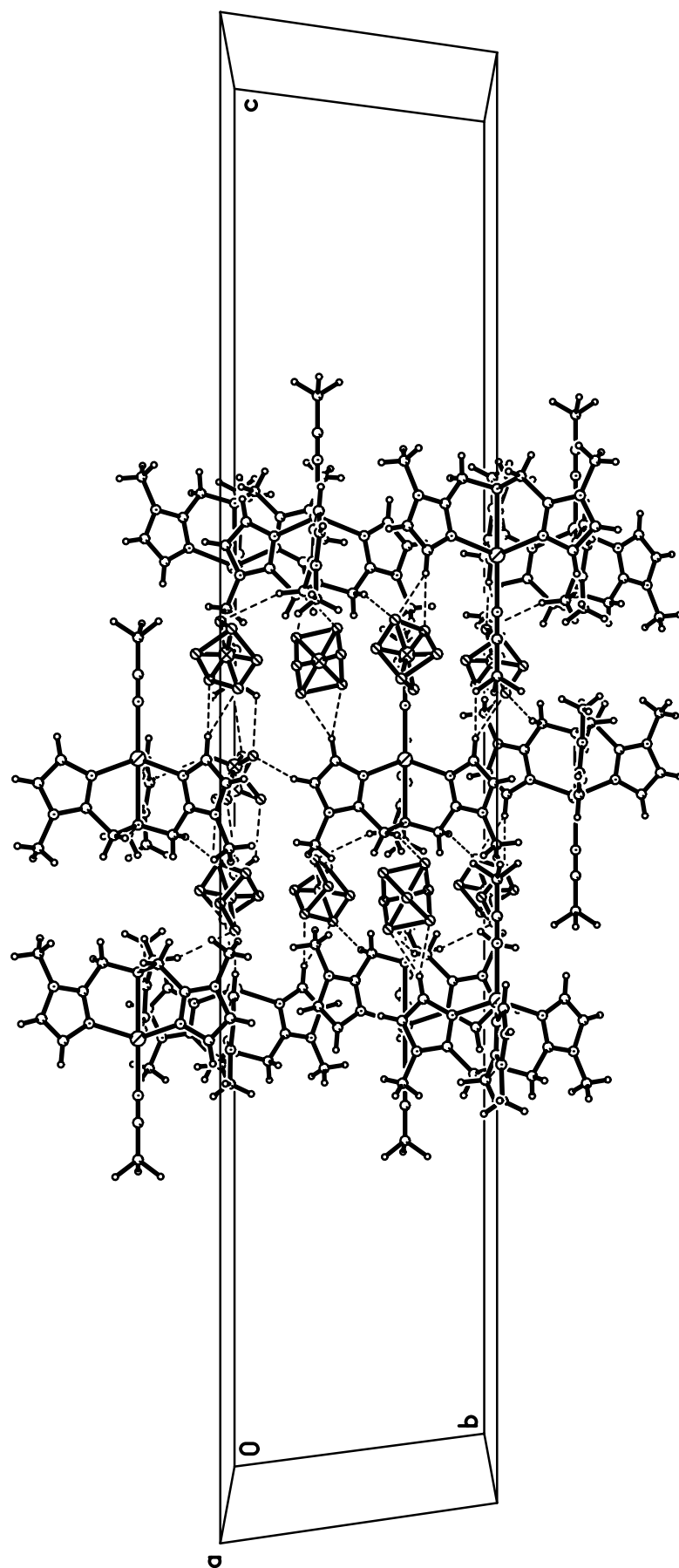


Figure S4. Cell packing diagram for $[\text{Hg}(\text{TMIMA})(\text{NCCH}_3)](\text{ClO}_4)_2$ (2).

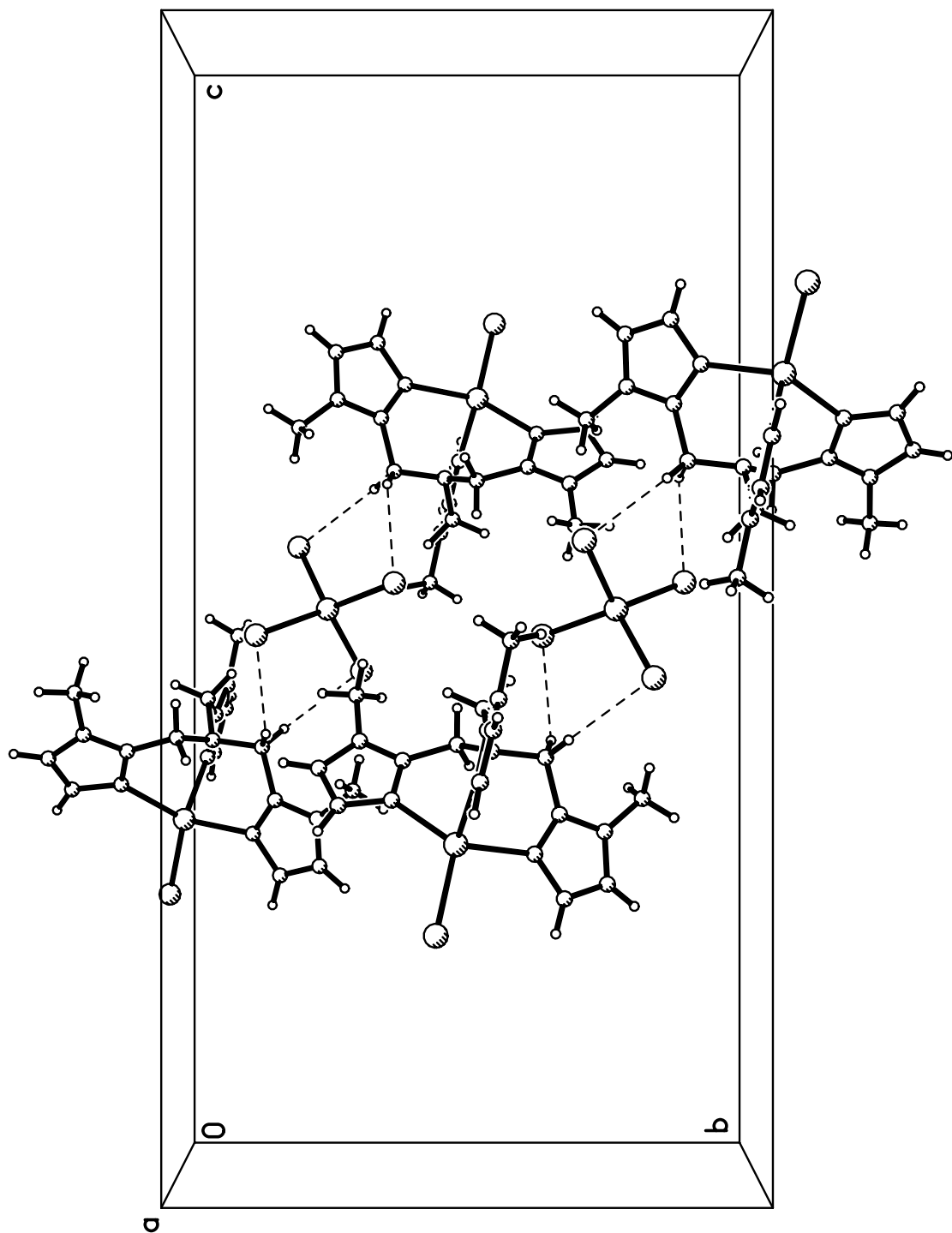


Figure S5. Cell packing diagram for [Hg(TMIMA)Cl](HgCl₄) (3).