An unusual diverse coordination of silver(I) with *N*-allylthiohydantoin ligand in the presence of benzene- and *p*-toluenesulfonate anions.

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Streszczenie

Crystalline silver(I) coordination compounds $[Ag_2(HL)_4(C_6H_5SO_3)_2]\cdot 0.5C_3H_7OH$ (**1**) and $[Ag_2(HL)(L)(CH_3C_6H_4SO_3)]$ (**2**) (HL=3-(prop-2-en-1-yl)-2-thioxoimidazolidin-4-one) have been obtained using silver(I) salts and the organic ligand HL. Three independent Ag(I) atoms in crystal **1** adopt exclusively different coordination environment: tetragonal pyramidal, seesaw and distorted tetrahedral. In crystal **2** metal ions coordination polyhedra are characterized by seesaw and distorted tetrahedral arrangements. Thiohydantoin molecules in both structures are attached to Ag(I) only through thiohydantoin S-atom, while its anionic form in **2** plays a role of N,S-linker. $C_6H_5SO_3^-$ anions in **1** are bound to the Ag(I) ions in a bridging mode, connecting silver ions into serpentine-like $\{Ag_4(C_6H_5SO_3)_4\}_n$ chains, within which silver ions are additionally bind with μ_2-S atoms of HL. Simultaneous coordination of HL and L^- moieties in polymeric chains of **2** allow the formation of Ag….Ag metallophilic interactions with the distance range of 2.99–3.13Å.

Słowa kluczowe

Silver(I), Benzensulfonate, Toluensulfonate anion, Thiohydantoin, crystal structure

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