



Two tetranuclear zinc clusters, $[\text{Zn}_4(\mu_3\text{-OEt})_2(\mu_2\text{-MalO})_4\text{Et}_2]$ and $[\text{Zn}_4(\mu_3\text{-GueO})_2(\mu_2\text{-GueO})_2(\mu_2\text{-MalO})_2(\text{MalO})_2]\cdot 2\text{C}_7\text{H}_8$, containing defective dicubane core geometries (MalOH is maltol and GueOH is guethol).

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The zinc alkoxide molecules in di- $\mu(3)$ -ethanolato-diethyltetrakis($\mu(2)$ -2-methyl-4-oxo-4H-pyran-3-olato- $\kappa(3)\text{O}(3),\text{O}(4):\text{O}(3)$)tetrazinc(II), $[\text{Zn}(4)(\text{C}(2)\text{H}(5))(2)(\text{C}(2)\text{H}(5)\text{O})(2)(\text{C}(6)\text{H}(5)\text{O}(3))(4)]$, (I), and bis($\mu(3)$ -2-ethoxyphenolato- $\kappa(4)\text{O}(1),\text{O}(2):\text{O}(1):\text{O}(1)$)bis($\mu(2)$ -2-ethoxyphenolato- $\kappa(3)\text{O}(1),\text{O}(2):\text{O}(1)$)bis($\mu(2)$ -2-methyl-4-oxo-4H-pyran-3-olato- $\kappa(3)\text{O}(3),\text{O}(4):\text{O}(3)$)bis(2-methyl-4-oxo-4H-pyran-3-olato- $\kappa(2)\text{O}(3),\text{O}(4)$)tetrazinc(II) toluene disolvate, $[\text{Zn}(4)(\text{C}(6)\text{H}(5)\text{O}(3))(4)(\text{C}(8)\text{H}(9)\text{O}(2))(4)]\cdot 2\text{C}(7)\text{H}(8)$, (II), lie on crystallographic centres of inversion. The asymmetric units of (I) and (II) contain half of the tetrameric unit and additionally one molecule of toluene for (II). The Zn(II) atoms are four- and six-coordinated in distorted tetrahedral and octahedral geometries for (I), and six-coordinated in a distorted octahedral environment for (II). The Zn(II) atoms in both compounds are arranged in a defect dicubane $\text{Zn}(4)\text{O}(6)$ core structure composed of two $\text{EtZnO}(3)$ tetrahedra and $\text{ZnO}(6)$ octahedra for (I), and of four $\text{ZnO}(6)$ octahedra for (II), sharing common corners. The maltolate ligands exist mostly in a $\mu(2)$ -bridging mode, while the guetholate ligands prefer a higher coordination mode and act as $\mu(3)$ - and $\mu(2)$ -bridges.

Adres publiczny

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