

Polyoxometalate-like structure of new potassium triphenylsiloxides:  
[K<sub>6</sub>(OSiPh<sub>3</sub>)<sub>6</sub>(C<sub>3</sub>H<sub>7</sub>OH)(H<sub>2</sub>O)]·2C<sub>6</sub>H<sub>5</sub>CH<sub>3</sub> and [K<sub>6</sub>(OSiPh<sub>3</sub>)<sub>6</sub>(H<sub>2</sub>O)<sub>2</sub>]

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The synthesis and structural characterization of two new potassium triphenylsiloxides, namely, aqua(propan-2-ol)hexakis(triphenylsilanolato)hexapotassium toluene disolvate, [K<sub>6</sub>(C<sub>18</sub>H<sub>15</sub>OSi)<sub>6</sub>(C<sub>3</sub>H<sub>8</sub>O)(H<sub>2</sub>O)]·2C<sub>7</sub>H<sub>8</sub>, and diaqua-hexakis(triphenylsilanolato)hexapotassium, [K<sub>6</sub>(C<sub>18</sub>H<sub>15</sub>OSi)<sub>6</sub>(H<sub>2</sub>O)<sub>2</sub>], are reported. Both compounds crystallize in the triclinic space group *P*. The structure in each case resembles an alkali metal polyoxometalate-like structure, in which electrostatic interactions are observed in the metal–oxygen core. Furthermore, both compounds also resemble a reverse micelles-like architecture, in which the hydrophilic core is enclosed in a hydrophobic shell. The cores of the complexes are flanked by hydrophobic aromatic rings derived from Ph<sub>3</sub>SiO<sup>−</sup> anions, where intramolecular π-interactions between the aromatic rings and potassium cations stabilize the cores of the crystals. Moreover, in both structures, the presence of hydrogen bonds is observed; until now, no crystal structures have been described containing K atoms and triphenylsiloxide molecules in which the presence of hydrogen bonds was confirmed. Thus, these coordination entities could be considered as attractive reagents for further synthetic protocols towards heterometallic complexes.

Słowa kluczowe

potassium sil–oxide, crystal structure, alkali metal sil–oxide, triphenylsilanol, triphenylsiloxide, reverse micelles, alkali metal polyoxometalate, POM

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