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New Calcium Complexes with Multifunctional Amphiphilic Phosphorus Ligands

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NEW CALCIUM COMPLEXES WITH MULTIFUNCTIONAL AMPHIPHILIC PHOSPHORUS LIGANDS

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Multifunctional ligands have attracted significant attention mainly due to their potential to form various frameworks by coordination to metal centers. So, hybrid inorganic–organic compounds are able to form layered structures with magnetic and electric properties, which may be modulated by interlayer interactions through the choice of the organic moieties and the inclusion of suitable chelating groups. Furthermore, the calcium coordinating properties of phosphonic acids were looked to arrive at a better understanding of their biological activity (inhibition of metalloenzymes, metabolic regulation, etc.).

Here we wish to report the synthesis of new calcium complexes with amphiphilic α -aminoalkylphosphonic and α -aminoalkylphosphonocarboxylic acids as ligands:¹

$$\begin{array}{c|c} & & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ &$$

SCHEME 1

These compounds are characterized in aqueous solution and in solid state.

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