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OVERVIEW OF SYNTHESIS OF PHOSPHONIC ACIDS

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Abstract

Phosphonic acids belong to organic compounds. The phosphonate functional group is characterized by three oxygen atoms (two hydroxy groups and a P=O double bond) and a phosphorus atom attached to one carbon atom, due to structural similarity to phosphate residues. used for many purposes. its coordinative or supramolecular properties. Phosphonic acids have been used for their bioactive properties (drugs, prodrugs), bone targeting, supramolecular or hybrid material design, surface functionalization, analytical purposes, medical imaging, or as phosphoantigens. These applications cover a wide range of research fields including chemistry, biology and physics, making the synthesis of phosphonates a critical problem for many research projects. This overview first provides an overview of the various application areas of phosphonic acids, described mainly on the basis of selected studies from the last two decades. In addition, this review article reports various methods that can be used to synthesize phosphonates.

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Phosphonic acids, oxygen atoms, phosphate, phosphoantigens, supramolecular chemistry

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