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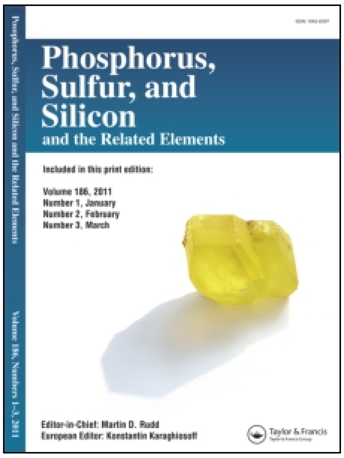

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Palladium Complexes with Aminophosphonates. K_2PdC1_4 Coordination to Aminophosphonic Acid Analogues of Aspartic and Glutamic Acids

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PALLADIUM COMPLEXES WITH AMINOPHOSPHONATES. K_2PdCl_4 COORDINATION TO AMINOPHOSPHONIC ACID ANALOGUES OF ASPARTIC AND GLUTAMIC ACIDS

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^{31}P and ^{13}C NMR spectroscopy is applied to study the reaction of the K_2PdCl_4 with 3-amino-3-phosphono-propionic acid(α-PAsp), 2-amino-3-phosphonopropionic acid(β-Pasp), 4-amino-4-phosphonobutyric acid(α-PGlut) and 2-amino-4-phosphonobutyric acid(γ-PGlut) in a wide pH range.

All the ligands are used as racemates.

Stoichiometries and bonding modes of the species formed are discussed.

The α-PAsp and α-PGlut coordinate Pd(II) ions similarly to the simple aminophosphonic acid analogues of glycine and α-alanine (1) forming PdL_2 and $PdLX_2$ ($X=Cl^-$, H_2O, OH^-) {N,O} chelate species in which the ligands are bounded via the amino and phosphonate groups.

The β-PAsp preferres a $\{N,O_c\}$ chelate coordination with a carboxylate bounded to palladium in an acid solution and {N,O} chelated complexes with a PO_3^{-2} group coordination in an alkaline solution.

Thermodynamic preferrence for the $\{N,O_c\}$ chelate species is observed in the Pd(II):γ-PGlut system.

The diastereoisomeric PdL_2 complexes readily distinguishable by the ^{31}P NMR spectroscopy are discussed.

1.E.Matczak-Jon, W.Wojciechowski, Inorg.Chim.Acta (in press).