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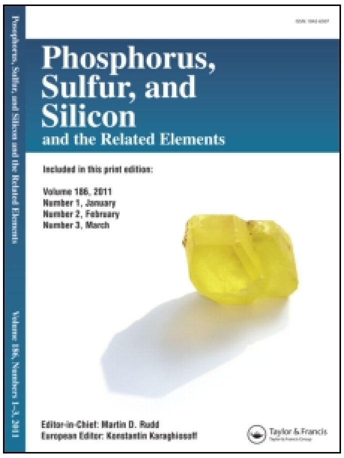

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Coordination Chemistry of C(X)NHP(Y) Ligands: Progress and Prospects

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COORDINATION CHEMISTRY OF C(X)NHP(Y) LIGANDS: PROGRESS AND PROSPECTS

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Coordination chemistry of the N-(thio)phosphorylated (thio)ureas and (thio)amides R—C(X)—NH—P(Y)R'_2 (X, Y = O, S; R = Alk, Ar, NR^2R^3; R′ = OAlk) was born in 1967 (A. Schmidpeter, H. Groeger, *Chem. Ber.*) and revive now. These ligands can be prepared with a variation of substituents at phosphorus, carbon and exocyclic nitrogen atoms, which suppose to affect a steric environment around a metal atom in a complex. The ligands can form complexes with soft (Ag, Cd, Co, Cu, Hg, Pb, Pd, Pt, Ni, Zn) or hard metals depending on nature of atoms X and Y. K and Na form salts with the ligands having different combination of X and Y atoms.

NH proton can be eliminated from the molecule or remain in the one during the complexation. It depends on nature of the ligands and methods of synthesis. At first case, the complexes formed have chelate structure. At second, one ligand behave as monodentate and uncharged particle.

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