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Composition, properties, and structure of palladium(II) chlorides in aqueous solution

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Abstract

The composition, stability, and structure of palladium(II) chloride complexes in hydrochloric acid media have been determined using nuclear-magnetic relaxation, magnetochemical methods, and Rayleigh light scattering. The predominant form in solution for palladium(II) concentrations greater than 0.005 moles/liter is the octahedral Pd6Cl12 or Pd6Cl14 2-, which has antiferromagnetic properties in contrast with the paramagnetic properties of the mononuclear aquachloride. The polarizability anisotropy of Pd-Cl bonds with terminal and bridging chlorine atoms has been determined. © 1991 Plenum Publishing Corporation.

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