09.4-3 UNUSUAL SILVER(I) PHENOXYALKANOATES. By Graham Smith1, Colin H.L. Kennard2, Thomas C.W. Mak3, Wai-Hing Yip3 and Eric J. O'Reilly1, Departments of Chemistry, Queensland Institute of Technology1, University of Queensland2, Australia and The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong3.

The structures of three atypical silver(I) carboxylates have been determined using X-ray diffraction. The silver(I) complex with (2-chlorophenoxy)acetic acid, [(Ag2L2).AgClO4], (1), (L-2-Cl-C6H4.OCH2CO2) comprises a basic bis-carboxylate dimer core similar to known silver(I) carboxylates but with a third linear silver and a carboxylate oxygen extending the dimer into a polymer structure. In addition, the perchlorate group is coordinated in one of the axial dimer sites.

09.4-4 COPPER(I) AND SILVER(I)-DIRHODIUM POLYHYDRIDES. By F. Becherchi, Istituto di Strutturistica Chimica, C.N.R., Area della Ricerca di Roma, Rome, Italy, and J. Ott, U. Statler and L. M. Venanzi, Laboratorium fur Anorganische Chemie, ETH-Z, Zurich, Switzerland.

The tripod-like tridentate ligand 1,1,1-tris(diphenylphosphinomethyl)ethane, triphos, has a specific geometry which only allows a facial coordination to a metal centre. The fragments (triphos)M can either activate a large variety of small molecules or stabilize groups of atoms which cannot exist by themselves or facilitate both polymeric and hydrogen-bridge formation. When [Rh(triphos)] is allowed to react with Cu+ or Ag+ salts (molar ratio 2:1) the trinuclear hydrides [Rh2CuH6(triphos)2], 1, and [Rh2AgH6(triphos)2], 2, are obtained. X-ray analyses of the [CF3SO3] salts of 1 and 2 were undertaken. The two compounds are isomorphous and show a binary symmetry with an axis passing through the coinage metal. The crystal structures revealed linear trimetallic chains in which the triphos ligands adopt a staggered rotational conformation. The hydrides were located by X-ray analysis, but the heavy donor atom arrangements suggest that the Cu+ and Ag+ centres, respectively in 1 and 2, interact with the six hydrides, which bridge the N-N contacts, in a severely distorted octahedral configuration. Their structures will be discussed and compared with those of related iridium compounds containing monodentate phosphines.