The crystal structures of the new K-complexes of copper(I) with some simple olefine derivatives: acrylamide - (CuCl₂LI)₄/₁/; acry­lic acid - (CuCl₂LI)₄/₁/; allylic alcohol - 
\[ \text{CuCl}_2(\text{CH} = \text{CH})\text{CH}_2\text{OH} \] /₁/; allyl cyanide - (CuCl₂LI)₄/₁/; trans-1-cyano-1,3-butadiene - (CuCl₂LI)₄/₁/; and p-divinylbenzene - (CuCl₂LI)₄/₁/ have been determined.

The distinctive feature of copper(I) halogeni­de complexes is the ability to form with cop­per and halogen atoms a large variety of the fragments: di-, tri-, tetra- and hexameric core, polymeric chains, layers etc. The obtained data and not so numerous literature ones (3 compounds with substituted and 4 - with cyclic olefines) allowed to de­fine some construction relationships of those formations in K-complexes discussed.

The homologous connexion of K-complexes fragments with itself and the copper(I) chlo­ride structure (ZnS-sphalerite) has been es­tablished. A cyclic core Cu₂Cl₄ is some parts of CuCl structure (hexagon Cu₂Cl₃, chain -CuCl₂- along [21] direction) may be con­sidered as the constructive units.

The peculiarity of CuCl motives in copper(I) K-complexes with regard to those in 6-ones is a presence of prolonged Cu-Cl bonds. Such a distinction is caused by the structure speci­ficity of K- and 6-coordinated copper(I) atoms: trigonal prism with outer chlorine atom at an apex in the first case and the tetrahedron with the equal Cu-Cl bonds in the 6-complexes.

Owing to the obtained results there is a strong possibility to predict the coordination character (K or 6) of copper(I) atoms on the ba­sis of the structure of CuCl-fragment, and for the polynuclear complexes - using the lattice parameters only.