

In this thesis we have studied growth and properties of thin films prepared by tilted deposition using sputtering. The construction of low pressure magnetron is presented. The influence of deposition conditions on formation of columnar structure using scanning electron microscope was studied. Formation of columnar structures of metals, composites metal-plasma polymer and plasma polymer is described. The influence of deposition conditions on surface roughness obtained by AFM is discussed. Chemical structure of composite and plasma polymer films has been determined using XPS and infrared spectroscopy.