In this project, production of the hybrid radar absorbing composite material that allows to reduce the radar crosssection is planned for unmanned aerial vehicles used in military. The hybrid composite material is going to be produced by incorporation of the polymer nanocomposite consist of NiFe doped carbon nanotubes within a metallic honeycomb. Carbon nanotube were used as dielectric lossy materials and NiFe particles were used as magnetic lossy materials. In addition to radar absorbing properties of hybrid composite material, complex architecture of material and the effect of filler materials used for modifying epoxy resin on radar absorbing properties.