

AN OVERVIEW OF RADAR-ABSORBING MATERIALS AND COATINGS FOR STEALTH APPLICATION

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Stealth is a low observable technology which is mostly employed as a military tactic to lessen aircraft signature and make them less apparent to enemy radars. A variety of techniques are used to achieve stealth, including decreasing the radar cross-section, limiting the infrared signal, camouflaging, etc. Among these techniques, decreasing radar-cross section by means of using radar-absorbing materials and coatings has wide range applications in stealth technology. Generally, the scattering and subsequent absorption of radar signals are accomplished primarily by appropriately dispersing metallic, dielectric, and magnetic materials in a polymeric matrix. Present article describes an overview of radar-absorbing materials and coatings for stealth application. In this overview, history of stealth technology since World War II, types of stealth technology, detailed discussion on radar stealth including materials, coatings, simulation, recent trends regarding new generation materials, etc. have been addressed.

Keywords: *Stealth technology, Radar stealth, Radar-absorbing coating, Nanomaterial, Conductive polymer, Resin*
