

New Aerospace Materials

In recent years, much progress has been made on the development of aerospace materials for structural and engine applications. Alloys, such as Al-based alloys, Mg-based alloys, Ti-based alloys, & Ni-based alloys, are developed for aerospace industry with outstanding advantages. Composite materials, the innovative materials, are taking more and more important roles in aircrafts. However, recent aerospace materials still face some major challenges, such as insufficient mechanical properties, fretting wear, stress corrosion cracking and corrosion. Consequently, extensive studies have been conducted to develop the next generation aerospace materials with superior mechanical performance and corrosion resistance to achieve improvements in both performance and life cycle cost.