

MATERIALS AND STRUCTURES SYMPOSIUM (C2)
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PROPERTY OF NANOMETER SiO₂ EPOXY RESIN CARBON FIBER COMPOSITES SUBJECTED
TO HEAT FLOW

Abstract

The casting pieces of epoxy resin added by different content nanometer SiO₂ particles are made. The heat resistance performance is obvious increased through the test of hot analysis instrument and 10% nano-SiO₂ content is optimal. The carbon fiber/epoxy composite laminates with 10% nano-SiO₂ as fillers are made to be the targets of high intensity laser irradiation tests the results show that the addition of nano-SiO₂ can increase the thermal protection and ablation properties of composites greatly.

Key words: nanometer SiO₂nanometer composite materiallaser