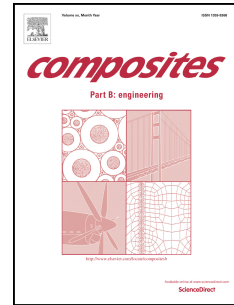


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**Characterization of resistive heating and thermoelectric behavior of
discontinuous carbon fiber-epoxy composites**

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Abstract

The resistive heating and thermoelectric characteristics of discontinuous carbon fiber-epoxy composites are explored experimentally and numerically. Composite samples with different carbon fiber concentrations (1, 3, and 5 wt.%) were manufactured using sonication and cast molding. DC current was applied, and the temperature distributions on the surfaces of the samples were assessed visually and quantitatively using an infrared camera. The resistive heating mechanism was investigated in conjunction with applied voltage and carbon fiber loading. Experimental results show that resistive heating efficiency increased proportionately with applied voltage and carbon fiber

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