

# Hyperthermia Property of Aligned Composite Nanofibers

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*Abstract* — The hyperthermia properties of nanoscale composite materials have received attention recently due to various applications. One of the main uses is the energy conversion. In this work we confirmed that a polymer solution containing titanium cobalt compounds as precursors can be electrospun into fibers and transformed into a ceramic oxide after heat treatment. After heat treatment the fiber size is reduced. The size of the fiber is in the range from nanoscale to the microscale. The fiber shows intensive hyperthermia behavior in the electromagnetic field. The temperature increases from 22 to 40°C when it is heated for 30 s. The surface temperature of the heat treated specimen increases less during the hyperthermia test as compared with that of the unheated specimen.