24th World Congress on

NANOMATERIALS AND NANOTECHNOLOGY

July 12-13, 2018 Bangkok, Thailand

Modification of non-woven composite yarn produced from polypropylene-Macca carbon as nanofiller

Sujaree Surakhai, Chadchai Sorarutayangkoor, Phwasoot Rodgerd and Jitladda Sakdapipanich Mahidol University, Thailand

Macca Carbon (MC) under high carbonization process. The MC revealed high characteristic such as nano-size, high porosity, rich minerals and generation of anions. Significantly, it could generate Far-Infrared Rays (FIR) with wavelengths in the range of 4-20 µm. Due to its high utilities; it might be applied to develop the efficiency in a non-woven multifilament composite yarn between the MC and Polypropylene (PP). To study the effect of FIR from the MC, the sweaters from knitting with and without MC in PP were kept into an oven under halogen lamp for 10 min. It was found that the temperature of the MC composited sweater was enhancer than that of the control about 2 °C. Moreover, the sweater knitted with and without MC was wear in the volunteer and then, they stayed in a room that had 40°C-controlled at 10 min to control the adjustment of body temperature. The average body temperature of volunteers wearing the sweater without MP was lesser than in the case of volunteers wearing sweater composing of MC, approximately 1.5°C. Hence, it could be concluded that the preparation of multifilament yarn from the MC-PP composite was successful in a productive yarn.

Biography

Sujaree Surakhai is a student at Department of Chemistry from Mahidol University, Thailand.

jitladda.sak@mahidol.ac.th

Notes: