Magnetic properties of titanium dioxide – reduce graphene oxide composite

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Titanium dioxide – reduce graphene oxide (TiO$_2$-RGO) composite having difference weight ratio up to 20 wt% were synthesized by hydrothermal method. The hydrothermal method were easier way to prepare TiO$_2$-RGO composites and can also change graphene oxide to reduced graphene oxide along with the particles of titanium dioxide loaded on the surface of the reduce graphene oxide sheet. The image of scanning electron microscopy (SEM) and Transmission electron microscopy (TEM) show the image of titanium dioxide particle dispersed on the surface area of reduce graphene oxide sheet. The peak from Fourier-transform infrared spectra analyzer (FT-IR) showed the peak of functional group of Ti-C-O at 1200 cm$^{-1}$ and 1070 cm$^{-1}$. XRD spectra show titanium dioxide anatase phase peak and the Magnetic properties of the TiO$_2$-RGO were present in weight ratio 5 to 20 wt% as measured by SQUID magnetometer increased 25.14x10$^{-4}$ emu/g.

Biography
Dusadee Khamboonrueang is a PhD student in Physics, Department of Physics. Faculty of Science Kasetsart University, Bankok and a lecturer in major Physics, Department of Science, Faculty of Science and Technology NakhonSawan Rajabhat University, NakhonSawan, Thailand. Her research interest is the research on how to synthesize the composite of titanium dioxide – graphene, the properties of composite and it’s application. She has expertise in materials science and renewable energy.

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