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## Magnetic properties of titanium dioxide – reduce graphene oxide composite

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Titanium dioxide – reduce graphene oxide ( $\text{TiO}_2$ -RGO) composite having difference weight ratio up to 20 wt% were synthesized by hydrothermal method. The hydrothermal method was an easier way to prepare  $\text{TiO}_2$ -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 reduced 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 reduced graphene oxide sheet. The peak from Fourier-transform infrared spectra analyzer (FT-IR) showed the peak of functional group of Ti-C-O at  $1200\text{ cm}^{-1}$  and  $1070\text{ cm}^{-1}$ . XRD spectra show titanium dioxide anatase phase peak and The Magnetic properties of the  $\text{TiO}_2$ -RGO were present in weight ratio 5 to 20 wt% as measured by SQUID magnetometer increased  $25.14 \times 10^{-4}\text{ emu/g}$ .

### Biography

Dusadee Khamboonrueang is a PhD student in Physics, Department of Physics, Faculty of Science Kasetsart University, Bangkok and a lecturer in major Physics, Department of Science, Faculty of Science and Technology Nakhon Sawan Rajabhat University, Nakhon Sawan, Thailand. Her research interest is the research on how to synthesize the composite of titanium dioxide – graphene, the properties of composite and its applications. She has expertise in materials science and renewable energy.

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