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### **Publications**

#### **Journal articles**

**K. Wetchakun**, N. Wetchakun, and S. Phanichphant, “Enhancement of the photocatalytic performance of Ru-doped TiO<sub>2</sub> nanoparticles”, *Adv. Mater. Res.*, pp. 853–856, vol. 55–57, 2008.

**K. Wetchakun** and S. Phanichphant, “Effect of Ru on photocatalytic activity of TiO<sub>2</sub> nanoparticles”, *Journal of Microscopy Society of Thailand*, vol. 22, 2008.

**K. Wetchakun**, C. Siriwong, C. Liewhiran, A. Wisitsoraat and S. Phanichphant, “Sensing of acetone vapor by flame-made Sn/ZnO nanoparticles”, *Sens. Lett.*, pp. 299–302(4), vol. 9, 2010.

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**K. Wetchakun**, T. Samerjai, N. Tamaekong, C. Liewhiran, C. Siriwong, V. Kruefu, A. Wisitsoraat, A. Tuantranont, S. Phanichphant, “Semiconducting metal oxides as sensors for environmentally hazardous gases”, *Sens. Actuators B:Chem.*, pp. 580–591, vol. 160, 2011.

**K. Wetchakun**, N. Wetchakun, B. Inceesungvorn and S. Phanichphant, “Photodegradation of phenol over Flame-made Sn-doped ZnO nanoparticles”, *J. Nano Res.*, pp. 97–103, vol. 16, 2012.

#### **Proceeding**

C. Siriwong, **K. Wetchakun**, A. Wisitsoraat, and S. Phanichphant, “Gas sensing properties of WO<sub>3</sub>-doped ZnO nanoparticles synthesized by flame spray pyrolysis”, *IEEE SENSORS Conference*, 2009.

#### **Conference Presentations**

#### **Poster Presentations**

**K. Wetchakun** and S. Phanichphant, Synthesis and photocatalytic activity of Ru-doped TiO<sub>2</sub> nanopowders, The First Thailand National Nanotechnology Conference: Pharmaceutical, Nanomaterials, Devices and Applications at Centara Duang Tawan Hotel, Chiang Mai, Thailand on 14–16 August 2007.

**K. Wetchakun** and S. Phanichphant, Effect of Ru on photocatalytic activity of TiO<sub>2</sub> nanoparticles, The Twenty-Fifth Annual Conference of the Microscopy Society of Thailand at Amarin Lagoon Hotel, Phitsanulok, Thailand on 9–11 January 2008.

**K. Wetchakun**, N. Wetchakun, and S. Phanichphant, Enhancement of the photocatalytic performance of Ru-doped TiO<sub>2</sub> nanoparticles, International Conference on Smart Materials-Smart/Intelligent Materials and Nano Technology & 2<sup>nd</sup> International Workshop on Functional Materials and Nanomaterials at Imperial Mae Ping Hotel, Chiang Mai, Thailand on 22–25 April 2008.

**K. Wetchakun**, N. Wetchakun, B. Inceesungvorn and S. Phanichphant, Photodegradation of phenol over flame-made Sn-doped ZnO nanoparticles, 7<sup>th</sup> International Conference on Diffusion in Solids and Liquids at Hilton Vilamoura As Cascatas Golf Resort & Spa, Algarve, Portugal on 26–30 June 2011.

**K. Wetchakun**, N. Wetchakun, B. Inceesungvorn and S. Phanichphant, Photocatalytic properties of flame-made undoped and tin-doped zinc oxide nanostructures, Pure and Applied Chemistry Conference 2012 (PACCON 2012) at The Empress Hotels, Chiang Mai, Thailand on 11–13 January 2012.

**Oral Presentations** **K. Wetchakun** and S. Phanichphant, Characterization of flame-made pure ZnO and Sn-doped ZnO nanostructures, CHE-USDC CONGRESS II at Dusit Thani Hotel, Pattaya, Thailand on 27–29 August 2009.

C. Siriwong, **K. Wetchakun**, A. Wisitsoraat, and S. Phanichphant, Gas sensing properties of WO<sub>3</sub>-doped ZnO nanoparticles synthesized by flame spray pyrolysis, IEEE SENSORS 2009 Conference at Christchurch Convention Centre 95 Kilmore Street Christchurch, Canterbury 8013, New Zealand on 25–28 October 2009.

**K. Wetchakun**, C. Liewhiran, and S. Phanichphant, Characterization of pure ZnO and Sn/ZnO nanostructures synthesized by flame spray pyrolysis, German-Thai Symposium on Nanoscience and Nanotechnology at Chiang Mai Orchid Hotel, Chiang Mai, Thailand on 21–22 September 2009.

**K. Wetchakun**, C. Siriwong, C. Liewhiran, A. Wisitsoraat, and S. Phanichphant, Sensing of acetone vapor by flame-made Sn/ZnO nanoparticles, 8<sup>th</sup> Asian Conference on Chemical Sensors at EXCO, Deagu, Korea on 11–14 November 2009.

**K. Wetchakun**, C. Siriwong, C. Liewhiran, A. Wisitsoraat and S. Phanichphant, Novel alternative for fast response methane sensor using flame-made Sn-doped ZnO nanostructures, 7<sup>th</sup> International Conference on Diffusion in Solids and Liquids at Hilton Vilamoura As Cascatas Golf Resort & Spa, Algarve, Portugal on 26–30 June 2011.

**K. Wetchakun**, N. Wetchakun, B. Inceesungvorn and S. Phanichphant, Effect of Sn doping on photocatalytic phenol degradation of ZnO nanoparticles with flame spray pyrolysis method, German-Thai Symposium on Nanoscience and Nanotechnology at Synchrotron Light Research Institute (SLRI), Nakhon Ratchasima, Thailand on 13–16 September 2011.