Supan Yodyingyong, PhD

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Academic backgrounds

University Qualifications

- Ph.D. in Science and Technology Education (2006 – 2010)
  Institute for Innovative Learning, Mahidol University, Thailand
- Diploma Degree in Teaching Profession (2005 – 2006)
  Maha Sarakham Rajabhat University, Thailand
- B.Sc. in Chemistry (2001– 2005)
  Faculty of Science, Maha Sarakham Rajabhat University, Thailand

Professional Trainings

- Research training with Prof. Guozhong Cao, Materials Science and Engineering Department, University of Washington, Seattle, Washington, USA (2009 – 2010)

Workings research topics

- Synthesis and applications of silica aerogel
- Processing, characterization, and applications of nanostructure materials
- Chemical Education

Scholarships

- Project for the Promotion of Talented Science and Mathematics Teachers (1998 – 2010)

Publications

International Journals

1. **Yodyingyong, S.**; Panijpan, B.; Triampo, W.; Triampo, D., An Inexpensive Furnace for Calcination: Simple TiO_2 Synthesis. *Journal of Chemical Education* 2009, 86(8), 950-952
2. **Yodyingyong, S.**; Zhang, Q.; Park, K.; Dandeneau, C. S.; Zhou, X.; Triampo, D.; Cao, G., ZnO nanoparticles and nanowire array hybrid photoanodes for dye-sensitized solar cells. *Applied Physics Letters* 2010, 96(7), 073115-3
3. **Yodyingyong, S.**; Zhou, X.; Zhang, Q.; Triampo, D.; Xi, J.; Park, K.; Limketkai, B.; Cao, G., Enhanced photovoltaic performance of nanostructured hybrid solar cell using highly oriented TiO2 nanotubes. *The journal of physical chemistry C* 2010, 114 (49), 21851–21855

4. **Yodyingyong, S.**; Sae-Kung, C.; Panijpan, B.; Triampo, W.; Triampo, D., Physicochemical Properties of Nanoparticles Titania from Alcohol Burner Calcination. *The Chemical Society of Ethiopia.* 2011, 25(2), 263-272
5. Xi, J.; Zhang, Q.; Xie, S.; **Yodyingyong, S**.; Park, K.; Sun, Y.; Li, J.; Cao, G. Fabrication of TiO_2 Aggregates by Electrospraying and Their Application in Dye-Sensitized Solar Cells. *Nanoscience and Nanotechnology Letters.* 2011, 3, 690–696
6. Zhang, Q.; **Yodyingyong, S.**; Xi, J.; Myers, D.; Cao, G. Oxide Nanowires for Solar Cell Applications. *Nanoscale.* 2012, 4, 1436-1445
7. Prakulpawong, P.; Wiriyanantawong, J.; Pornpoonsawat, J.; **Yodyingyong, S**.; Triampo, D. Fabrication Study of Hydrophobic Polyurethane Sponge for Oil Absorption Application. *Key Engineering Materials.* 2017, 751, 731-737
8. Lati, W., Triampo, D. & **Yodyingyong, S**. Exposure to Nanoscience and Nanotechnology Using Guided-Inquiry-Based Activities with Silica Aerogel To Promote High School Students' Motivation. *Journal of Chemical Education*. 2019, 96 (6), 1109-1116
9. Piyawongsiri, T., Ammarinponchai, C., **Yodyingyong, S**., Nidup, T. & Triampo, D. Durable Superhydrophobic Silica Aerogel Coating from Hydrophobic Gel Synthesis. *Key Engineering Materials.* 2019, 824, 156-162
10. Hongsakul, T., Nidup, T., **Yodyingyong, S.** & Triampo, D. Effect of Crystallinity on Near Infrared Reflectance of Indium Tin Oxide Nanorice-particles. *Key Engineering Materials.* 2019, 824, 168-175
11. Prompawilai, A., **Yodyingyong, S.** & Darapond Triampo. Effects of Tetraethyl Orthosilicate on Improving Adhesion Between Polyurethane Sponge/Hydrophobic Silica Gel Composite Materials for Oily Wastewater Treatment. *Science of Advanced Materials*. 2020, 12(2), 200-205
12. *Eangpayung, S., **Yodyingyong, S**. & Triampo, D.* Preparation of Silica Aerogels Monoliths from Hydrophobic Silica Gels and Pluronic10R5 via Sol-Gel Process. *Science of Advanced Materials*. 2020, 12(2), 206-211
13. Kaenphakdee, S., **Yodyingyong, S.**, Leelawattanachai, J., Triampo, W., Sanpo, N., Jitputti, J., Darapond Triampo, D., **(2020).** *Synthesis Study of Silver-Doped Zinc Oxide for Near-Infrared Shielding Applications*. Materials Science Forum, 1007, 143-147
14. Putthithanas, P., **Yodyingyong, S.**, Leelawattanachai, J., Triampo, W., Sanpo, N., Jitputti, J., Triampo, D. **(2020).** *Effect of Morphology on Near-Infrared Shielding Properties of Aluminum-Doped ZnO by Solvothermal Synthesis*. Materials Science Forum, 1007, 148-153
15. Sanpo, N., Jitputti, J., Prakulpawong, P., Srikamut, C., **Yodyingyong, S.**, & Triampo, D. **(2020).** *Silica Aerogel Thermal Insulation Coating as Commodity Usage*. IOP Conference Series: Materials Science and Engineering, 811, 012009. doi:10.1088/1757-899x/811/1/012009
16. Termkleebbuppa, S., **Yodyingyong, S**., Leelawattanachai, J., Triampo, W., Sanpo, N., Jitputti, J., & Triampo, D. **(2020).** *Copper-Zinc Oxide Synergistic Approach as Low-Emissivity Material for Energy-Saving Windows*. IOP Conference Series: Materials Science and Engineering, 811, 012010. doi:10.1088/1757-899x/811/1/012010

Patents

1. **Supan Yodyingyong**. (Thailand Patent, 2013). "Process for the Preparation of a Silica Aerogel"; Application Number: 1301006263
2. **Supan Yodyingyong**. (2017) "A Method for Producing a Micron-Size Spherical Silica Aerogel"; Application Number: PCT/TH2017/000086

3. **Supan Yodyingyong.** (2019) "A Method for Producing a Micron-Size Spherical Silica Aerogel"; Application Number:

    - AU 2017384966 B2
    - EP 2017887839
    - US 20190256363 A
    - CN 110088040 A
    - JP 2020504070A
    - TH 1801002274

4. Noppakun SANPOKoichi, FukudaJaturong JITPUTTI, Darapond TRIAMPO, and **Supan YODYINGYONG.** (2020) "Thermal insulation coating"; Application Number: WO2020076242A1

Awards and Distinctions:

- National Research Council of Thailland (2020), Invention Award, "A Method for Producing a Micron-Size Spherical Silica Aerogel"
- Gold Medal Award**,** the 13th Taipei International Invention Show & Technomart (INST 2017), "Method of Preparing a Spherical Silica Aerogel", 27 – 29 September, 2017 Taipei, Taiwan
- Invention and Innovation Award, Mahidol University (2016) "A Cost-Effective Synthesis of Silica Aerogel by Ambient Pressure Drying Route"
- 2015 Invention Award, National Research Council of Thailland (2015) "Silica Aerogel - the Material for the Future"