

2012=2555 (Oct 2011 – Sep 2012)

BL1.3W: SAXS 2 articles

1. Soontaranon, S. and Rugmai, S. "Small Angle X-ray Scattering at Siam Photon Laboratory" *Chinese Journal of Physics* 50.2 (Apr 2012): 204-210.
2. Rugmai, S., Chokprasombat, K., Sirisathitkul, C., Rangsanga, P., Harding, P., Sriksirin, T. and Jantaratana, P. "Small Angle X-ray Scattering Spectra of Iron-based Magnetic Fluid" *Materials and Technology* 46 (Jul- Aug 2012): 47-51.

BL2.2:TRXAS 2 articles

1. Chotiwan, S., Kityakarn, S., Poo-arporn, Y. and Viravathana, P. "Time-Resolved XANES Studies on used Silica Supported Cobalt Catalysts" *Engineering Journal* 16.3 (Jul 2012): 115-121.
2. Phokha, S., Pinitsoontorn, S., Chirawatkul, P., Poo-arporn, Y. and Maensiri, S. "Synthesis, Characterization, and Magnetic Properties of Monodisperse CeO₂ Nanospheres Prepared by PVP-assisted Hydrothermal Method" *Nanoscale Research Letters* 7 (Jul 2012): 425. Use BL2.2, BL8

BL3.2Ua: PES 5 articles

1. King, P.D.C., He, R.H., Eknapakul, T., Buaphet, p., Mo, S.-K., Kaneko, Y., Harashima, S., Hikita, Y., Babramy, M.S., Bell, C., Hussain, Z., Tokura, Y., Shen, Z.X., Hwang, H.Y., Baumberger, F. and Meevasana, W. "Subband Structure of a Two-Dimensional Electron Gas Formed at the Polar Surface of the Strong Spin-Orbit Perovskite KTaO₃" *Physical Review Letters* 108 (Mar 2012): 117602.
2. Noothongkaew, S., Nakajima, H., Tong-on, A., Meevasana, W. and Songsiriritthigul, P. "Oxidation of Zn in UHV Environment at Low Temperature" *Applied Surface Science* 258.6 (Jan 2012): 1955-1957.
3. Saekow, S., Maiakgree, W., Jarernboon, W., Pimanpang, S. and Amornkitbamrung, V. "High Intensity UV Radiation Ozone Treatment of Nanocrystalline TiO₂ Layers for High Efficiency of Dye-sensitized Solar Cells" *Journal of Non-Crystalline Solids* 358.17 (Sep 2012): 2496-2500.
4. Sirisathitkul, C., Pansong, Y. and Rattanasuporn, S. "Longitudinal and Polar MOKE Magnetometry of Magnetoresistive Cobalt Thin Films Prepared by Thermal Evaporation" *Sains Malaysiana* 41.5 (2012): 617-621.
5. Yana, J., Sanghiran Lee, V., Rattanachai, Y., Songsiriritthigul, P., Medhisuwakul, M., Vannarat, S., Dokmaisrijan, S., Vilaithong, T. and Nimmanpipug, P. "Computational and Experimental Study of Low Energy Ar⁺ Bombardment on Nafion" *Surface and Coatings Technology* 206.17 (Apr 2012): 3607-3613.

BL3.2Ub: PEEM 1 article

1. Osaklung, J., Euaruksakul, C., Meevasana, W. and Songsiriritthigul, P. "Spatial Variation of the Number of Graphene Layers formed on the Scratched 6H-SiC(0 0 1) Surface" *Applied Surface Science* 258 (Mar 2012): 4072-4077.

IR end station 8 articles

1. Buensanteai, N., Thumanu, K., Sompong, M., Athinuwat, D. and Prathuangwong, S. "The FTIR Spectroscopy Investigation of the Cellular Components of Cassava after Sensitization with Plant Growth Promoting Rhizobacteria, *Bacillus subtilis* CaSUT007 " *African Journal of Microbiology Research* 6.3 (Jan 2012): 603-610.
2. Jandaruang, J., Siritapetawee, J., Thumanu, K., Songsiriritthigul, C., Krittanai, C., Daduang, S., Dhiravisit, A. and Thammasirirak, S. "The Effects of Temperature and pH on Secondary Structure and Antioxidant Activity of *Crocodylus siamensis* Hemoglobin " *The Protein Journal* 31 (Jan 2012): 43-50.
3. Khamdahsag, P., Pattanasiriwisawa, W., Nanny, M. A. and Grisdanurak, N. "Comparative Study of Sticky Rice Starch and Polyvinylpyrrolidone as Templates for ZnO and Ce-ZnO Syntheses" *Environmental Engineering and Management Journal* 11.4 (Apr 2012): 759-766.

4. Machana, S., Weerapreeyakul, N., Barusrux, S., Thumanu, K. and Tanthanuch, W. "FTIR Microspectroscopy Discriminates Anticancer Action on Human Leukemic Cells by Extracts on *Pinus kesiya*; *Cratoxylum formosum* ssp. *Pruniflorum* and *Melphalan*" *Talanta* 93.15 (May 2012): 371-382.
5. Machana, S., Weerapreeyakul, N., Barusrux, S., Thumanu, K. and Tanthanuch, W. "Synergistic Anticancer Effect of the Extracts from *Polyalthia Evecta* Caused Apoptosis in Human Hepatoma (HepG2) Cells " *Asia Pacific Journal of Tropical Biomedicine* 2.8 (Aug 2012): 589-596.
6. Khoushab, F., Jaruseranee, N., Tanthanuch, W. and Yamabhai, M. "Formation of Chitin-based Nanomaterials Using a Chitin-binding Peptide Selected by Phage-display" *International Journal of Biological Macromolecules* 50.5 (Jun 2012): 1267-1274.
7. Siritapetawee, J., Thumanu, K., Sojikul, P. and Thammasirak, S. "A Novel Serine Protease with Human Fibrinolytic Activities from *Artocarpus heterophyllus latex*" *Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics* 1824.7 (Jul 2012): 907-912.
8. Sutapon, W., Raksakulpiwat, Y. and Suppakarn, N. "Effect of Heat Treatment on Chemical Structure of a Bio-Filler from *Vetiver Grass*" *Advanced Materials Research* 410 (2012): 71-74.

BL6a: DXL 1 article

1. Phromsuwan, U., Sirisathitkul, C., Sirisathitkul, Y. and Sriphung, C. "Implementation of Edge Detection Algorithms to Characterize Magnetic Micropillars Patterned by X-Ray Lithography" *International Journal of Physical Sciences* 7.12 (Mar 2012): 1959-1966.

BL6b: XRF 1 article

1. Tancharakorn, S., Tanthanuch, W., Kamonsutthipaijit, N., Wongprachanukul, N., Sophon, M., Chaichuay, S., Uthaisar, C. and Yimnirun, R. "The First Microbeam Synchrotron X-ray Fluorescence Beamline at the Siam Photon Laboratory" *Journal of Synchrotron Radiation* 19.4 (Jul 2012): 536-540.

MX end station 2 articles

1. Pengthaisong, S., Chen, C.-F., Withers, S.G., Kuaprasert, B. And Ketudat Cairns, J. R. "Rice BGLu1 Glycosynthase and Wild Type Transglycosylation Activities Distinguished by Cyclophellitol Inhibition" *Carbohydrate Research* 352 (2012): 51-59.
2. Pengthaisong, P., Withers, S. G., Kuaprasert, B., Svasti, J. and Ketudat Cairns, J. R. "The Role of the Oligosaccharide Binding Cleft of Rice BGLu1 in Hydrolysis of Celooligosaccharides and in their Synthesis by Rice BGLu1 Glycosynthase" *Protein Science* 21.3 (Mar 2012): 362-372.

SR Related 1 article

1. Mongkhonsin, B., Nakbanpote, W., Nakai, I., Hokura, A. and Jearanaikoon, N. "Distribution and Speciation of Chromium Accumulated in *Gynura Pseudochina* (L) DC." *Environmental and Experimental Botany* 74 (Dec 2011): 56-64.

Others 1 article

1. Roongtao, R., Rugmai, S. and Vittayakorn, W. "Phase Development and Dielectric Properties of 0.98BaTiO₃-0.02Ba (Mg¹/3Nb²/3) O₃ Ceramic" *Materials Science Forum* 700 (2012): 58-62.

BL8: XAS 17 articles

1. Boonurapeepinyo, S., Jearanaikoon, N. and Sakkayawong, N. "Reactive Red (RR141) Solution Adsorption by Nanochitin Particle via XAS and ATR-FTIR Techniques" *International Transaction Journal of Engineering, Management Applied Science Technogies* 2.4 (Oct 2011): 461-469.
2. Chandarak, S. Jutimooksil, J., Poiprapai, S., Srilomsak, S., Rujirawat, S., Yimnirun, R. and Monnor, T "Synchrotron X-Ray Absorption Study of Cu and Mn Doped BiFeO₃BaTiO₃ Multiferroic Ceramics" *Ferroelectrics* 422.1 (Oct 2011): 23-29.
3. Chayakul, K., Srithanratana, T. and Hengrasmee, S. "Catalytic Activities of Re-Ni/CeO₂ Bimetallic Catalysts for Water Gas Shift Reaction" *Catalysis Today* 175.1 (Oct 2011): 420-429.

4. Chokprasombat, K., Sirisathitkul, C., Harding, P., Chandarak, S. and Yimnirun, R. "Synchrotron X-Ray Absorption Spectroscopy Study of Self-Assembled Nanoparticles Synthesized from $\text{Fe}(\text{acac})_3$ and $\text{Pt}(\text{acac})_2$ " *Journal of Nanomaterials* 2012 (2012): 4 p. Article ID 758429.
5. Harnwungmong, A., Kurosaki, K., Kosuga, A., Ishimaru, M., Plirdpring, T., Yimnirun, R., Jutimoosik, J., Rujirawat, S., Ohishi, Y., Muta, H., Yamanaka, S. "Enhancement of Thermoelectric Properties of CoSb_3 -Based Skutterudites by Double Filling of Tl and In" *Journal of Applied Physics* 112 (2012): 043509.
6. Laokiat, L., Khemthong, P., Grisdanurak, N., Sreearunothai, P., Pattanasiriwisawa, W. and Klysubun, W. "Photocatalytic Degradation of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) Using Transition Metal-Doped Titanium Dioxide Immobilized on Fibreglass Cloth" *Korean Journal Chemical Engineering* 29.3 (Mar 2012): 377-383.
7. Laokiat, L., Khemthong, P. and Grisdanurak, N. "Electronic Chemical Properties of Vanadium Doped TiO_2 for Photocatalytic Degradation of BTEX" *Materials Science Forum* 700 (2012): 223-226.
8. Limpijumnong, S., Jutimoosik, J., Palakawong, P., Klysubun, W., Nukeaw, J., Du, M-H. and Rujirawat, S. "Determination of Miscibility in MgO-ZnO Nanocrystal Alloys by X-ray Absorption Spectroscopy" *Applied Physics Letters* 99.26 (Dec 2011): 261901-4.
9. Niltharach, A., Kityakarn, S., Worayingyong, A., T-Thienprasert, J., Klysubun, W., Songsiriritthigul, P. and Limpijumnong, S. "Structural Characterization Sol-gel Synthesized TiO_2 and Ce/TiO_2 Nanostructure" *Physica B* 407 (2012): 2915-2918.
10. Paul, A., Trautmann, C., Mattauch, S., Jutimoosik, J., Yimnirun, R., Rujirawat, S., Höpfner, B., Lauermann, I., Lux-Steiner, M., Böni, P. "Direct Manipulation of the Uncompensated Antiferromagnetic Spins in Exchange Coupled System by GeV Ion Irradiation" *Applied Physics Letters* 100 (2012): 253102.
11. Pimsuta, M., Neramittagapong, A., Prayoonpokarach, S. and Wittayakun, J. "Desilication of NaZSM-5 and Utilization as Support of Fe for Phenol Hydroxylation" *International Journal of Chemical Engineering and Applications* 3.2 (Apr 2012): 86-91.
12. Phokha, S., Pinitsoontorn, S., Chirawatkul, P., Poo-arporn, Y. and Maensiri, S. "Synthesis, Characterization, and Magnetic Properties of Monodisperse CeO_2 Nanospheres Prepared by PVP-assisted Hydrothermal Method" *Nanoscale Research Letters* 7 (Jul 2012): 425. Use BL2.2, BL8
13. Rintramee, K., Föttinger, Rupprechter, G., Wittayakun, J. "Ethanol Adsorption and Oxidation on Bimetallic Catalysts Containing Platinum and Base Metal Oxide Supported on MCM-41" *Applied Catalysis B: Environmental* 115-116 (2012): 225-235.
14. Suwanchawalit, C., Wongnawa, S., Sriprang, P., Meanha, P. "Enhancement of the Photocatalytic Performance of Ag-modified TiO_2 Photocatalyst Under Visible Light" *Ceramics International* 38.5 (Jul 2012): 3519-4420.
15. Sorolla II, M.G., Dalida, M. L., Khemthong, P. and Grisdanurak, N. "Photocatalytic Degradation of Paraquat using Nano-sized $\text{Cu-TiO}_2/\text{SBA-15}$ under UV and Visible Light" *Journal of Environmental Science* 24.6 (Jun 2012): 1122-1132.
16. Wongsanmai, S., Kanchiang, K., Chandarak, s., Laosiritaworn, Y., Rujirawat, S. and Yimnirun, R. "Crystal Structure and Ferroelectric Properties of Mn-doped $((\text{K}_{0.5}\text{Na}_{0.5})_{0.935}\text{Li}_{0.065}) \text{NbO}_3$ Lead-free Ceramics" *Current Applied Physics* 12.2 (Mar 2012): 418-421.
17. Won-in, K., Thongkam, Y., Pongkrapan, S., intarasiri, S., Thongleurm, C., Kamwanna, T., Leelawathanasuk, T. and Dararutana, P. "Raman Spectroscopic Study on Archaeological Glasses in Thailand: Ancient Thai Glass" *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 83.1 (2011): 231-235.

