

2014=2557 (Oct 2013 – Sep 2014)

BL1.3W: SAXS 5 articles

1. Kalapakdee, A. and Amornsakchai, T. "Mechanical Properties of Preferentially Aligned Short Pineapple Leaf Fiber Reinforced Thermoplastic Elastomer: Effects of Fiber Content and Matrix Orientation" *Polymer Testing* 37 (Aug 2014): 36-44.
2. Luong Ngoc, A., Nguyen Phuc, D., To Thanh, L., Dao Thi, T. N., Than Duc, H. "Synchrotron and Magnetic Study of Chromium-Substituted Nickel Ferrites Prepared by Using Sol-Gel Route" *IEEE Transactions on Magnetics* 50. 6 (Jun 2014): 2502605.
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5. Yhirayha, C., Soontaranon, S., Wittaya-areekul, S. and Pitaksuteepong, T. "Formulation of Lyotropic Liquid Crystal Containing Mulberry Stem Extract: Influences of Formulation Ingredients on the Formation and the Nanostructure" *International Journal of Cosmetic Science* 36. 3 (Jun 2014): 213-220.

BL2.2: TRXAS 3 articles

1. Chew, L. M., Kangvansura, P., Ruland, H., Schulte, H. J., Somsen, C., Xia, W., Eggeler, G., Worayingyong, A. and Muhler, M. "Effect of Nitrogen Doping on the Reducibility, Activity and Selectivity of Carbon Nanotube-Supported Iron Catalysts Applied in CO₂ Hydrogenation" *Applied Catalysis A: General* 482 (Jul 2014): 163-170.
2. Kamon-in, O., Buakeaw, S., Klysubun, W., Limpirat, W., Srilomsak, S. and Meethong, N. "A Study of Transient Phase Transformation in LFS/C using in-situ Time Resolved X-ray Absorption Spectroscopy" *International Journal of Electrochemical Science* 9 (2014): 4257-4267. Use BL8, BL2.2
3. Khemjeen, Y., Pinitsoontorn, S., Chompoosor, A. and Maensiri, S. "Reducing the Ordering Temperature of CoPt Nanoparticles by B Additive" *Journal of Applied Physics* 116. 5 (Aug 2014): 053910-5.

BL3.2Ua: PES 11 articles

1. Gosawit-Utke, G., Meethom, S., Pistidda, C., Milanese, C., Laipple, D., Saisopa, T., Marini, A., Klassen, T. and Dornheim, M. "Destabilization of LiBH₄ by Nanoconfinement in PMMAecoeBM Polymer Matrix for Reversible Hydrogen Storage" *The International Journal of Hydrogen Energy* 39. 10 (Mar 2014): 5019-5029.
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3. Jittiarporn, P., Sikong, L., Koop-tarmond, K. and Taweepreda, W. "Effects of Precipitation Temperature on the Photochromic Properties of h-MoO₃" *Ceramics International* 40. 8 (Sep 2014): 13487-95. Use BL3.2a, IR
4. Lim, S. P., Pandikumar, A., Huang, N. M. and Lim, H. N. "Enhanced Photovoltaic Performance of Silver@Titania Plasmonic Photoanode in Dyesensitized Solar Cells" *Royal Society of Chemistry Advanced* 4. 72 (2014): 38111-38118.

5. Tang, M. S. Y., Witcher, T. J., Yeoh, K. H., Chua, C. L., Woon, K. L., Show, P. L., Lin, Y. K. and Ling, T. C. "The Removal of Metallic Single-Walled Carbon Nanotubes Using an Aqueous Two-Phase System" *Journal of Nanoscience and Nanotechnology* 14, 5 (May 2014): 3398-3402.
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7. Thien, G. S. H., Pandikumar, A., Huang, N. M. and Lim, H. N. "Highly Exposed {001} Facets of Titanium Dioxide Modified with Reduced Graphene Oxide for Dopamine Sensing" *Scientific Reports* 4. 5044 (2014) DOI:10.1038/srep05044
8. Witcher, T. J., Yeoh, K. H., Calvin, Y. B. N., Talik, N. A., Chua, C. L., Woon, K. L., Chanlek, N., Nakajima, H., Saisopa, T., Songsiriritthigul, P., Oswald, S. and Yap, B. K. "Enhancement of the Work Function of Indium Tin Oxide by Surface Modification Using Caesium Fluoride" *Journal of Physics D: Applied Physics* 46 (2013): 475102.
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10. Witcher, T. J., Yeoh, K. H., Chua, C. L., Woon, K. L., Chanlek, N., Nakajima, H., Saisopa, T. and Songsiriritthigul, P. "The Effect of Carbon Contamination and Argon Ion Sputtering on the Work Function of Chlorinated Indium Tin Oxide" *Current Applied Physics* 14 (2014): 472-475.
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BL3.2Ub: PEEM 3 articles

1. Kanjanachuchai, S. and Euaruksakul, C. "Directions and Breakup of Self-Running in Droplets on Low-Index InP Surfaces" *Crystal Growth & Design* 14. 2 (2014): 830-834.
2. Wongpanya, P., Tunmee, S., Euaruksakul, C., Songsiriritthigul, P. and Witit-anun, N. "Corrosion Behaviors and Mechanical Properties of CrN Film" *Advanced Materials Research* 853 (2014): 155-163.
3. Wongpinij, T., Wongpanya, P., Euaruksakul, C., Photongkam, P. and Witit-anun, N. "Corrosion Behavior of TiAlN film on AISI 4140 Steel" *Journal of Metals, Materials and Minerals* 23. 2 (Dec 2013): 59-65.

BL5.2: SUT-Nano-SLRI 11 articles

1. Kidkhunthod, P., Phumying, S. and Maensiri, S. "X-ray Absorption Spectroscopy Study on Yttrium Iron Garnet (Y₃Fe₅O₁₂) Nanocrystalline Powders Synthesized Using Egg White-Based Sol-Gel Route" *Microelectronic Engineering* 126 (Aug 2014): 148-152.
2. Paul, A., Reitingner, C., Autieri, C., Sanyal, B., Kreuzpaintner, W., Jutimoosik, J., Yimnirun, R., Bern, F., Esquinazi, P., Korells, P. and Boni, P. "Exotic Exchange Bias at Epitaxial Ferroelectric-Ferromagnetic Interfaces" *Applied Physics Letters* 105 (2014): 022409.
3. Prasoetsopha, N., Pinitsoontorn, S., Kamwanna, T., Kurosaki, K., Ohishi, Y., Muta, H. and Yamanaka, S. "Thermoelectric Properties of Ca₃Co₄ xGaxO_{9+d} Prepared by Thermal Hydro-decomposition" *Journal Electronic Materials* 43. 6 (Jun 2014): 2064-2071. Use BL5, BL8
4. Saensuk, O., Maensiri, S., Bootchanont, A. and Swatsitang, E. "Fabrication and Magnetic Properties of Electrospun Ni_{1-x}Cu_xFe₂O₄ Nanofibers" *Microelectronic Engineering* 126 (Aug 2014): 158-164.
5. Tangcharoen, T., Klysubun, W., Kongmark, C. and Pecharapa, W. "Synchrotron X-ray Absorption Spectroscopy and Magnetic Characteristics Studies of Metal Ferrites (metal = Ni, Mn, Cu) Synthesized by Sol-gel Auto-combustion Method" *Physica Status Solidi (a)* 211. 8 (Aug 2014): 1903-1911.

6. Tangcharoen, T., Klysubun, W., Ruangphanit, A. and Pecharapa, W. "A Comparison of Cation Distribution and Valence State in Spinel Crystal Structure of Zinc and Nickel Ferrites Using the Synchrotron X-ray Absorption Spectroscopy (XAS) Analysis" *Integrated Ferroelectrics: An International Journal* 155. 1 (2014): 80-90.
7. Thaweesaeng, N., Suphankij, S., Techitdheera, W. and Pecharapa, W. "Structural, Optical and Photo Catalytic Properties of Cu-doped ZnO Nanoparticles Synthesised by co-precipitation Method" *International Journal of Nanotechnology* 11 (2014): 274-286.
8. Wiriya, N., Bootchanont, A., Maensiri, S. and Swatsitang, E. "Magnetic Properties of $\text{Zn}_{1-x}\text{Mn}_x\text{Fe}_2\text{O}_4$ Nanoparticles Prepared by Hydrothermal Method" *Microelectronic Engineering* 126 (Aug 2014): 1-8.
9. Wiriya, N., Bootchanont, A., Maensiri, S. and Swatsitang, E. "X-ray Absorption Fine Structure Analysis of $\text{Mn}_{1-x}\text{Co}_x\text{Fe}_2\text{O}_4$ Nanoparticles Prepared by Hydrothermal Method" *Japanese Journal of Applied Physics* 53 (2014): 06JF09.
10. Wongpratrat, U., Meansiri, S. and Swatsitang, E. "Local Structure and Magnetic Property of $\text{Ni}_{1-x}\text{Zn}_x\text{Fe}_2\text{O}_4$ ($x = 0, 0.25, 0.50, 0.75, 1.00$) Nanoparticles Prepared by Hydrothermal Method" *Microelectronic Engineering* 126 (Aug 2014): 19-26.
11. Yotburut, B., Yamwong, T., Thongbai, P. and Maensiri, S. "Synthesis and Characterization of Coprecipitation-Prepared La-doped BiFeO_3 Nanopowders and their Bulk Dielectric Properties" *Japanese Journal of Applied Physics* 53 (2014): 06JG13.

BL6a: DXL 3 articles

1. Kerdlaapee, P., Wisitsoraat, A., Phokaratkul, D., Leksakul, K., Phatthanakul, R. and Tuantranont, A. "Fabrication of Electrostatic MEMS Microactuator Based on X-ray Lithography with Pb-based X-ray Mask and Dry-Film-Transfer-to-PCB Process" *Microsystem Technologies* 20. 1 (Jan 2014): 127-135.
2. Kuntanawat, P., Ruenin, J., Phatthanakul, R., Kunhorm, P., Surareungchai, W., Sukprasong, S. and Chomnawan, N. "An Electrostatic Microwell-Based biochip for Phytoplanktonic Cell Trapping" *Biomicrofluidics* 8 (2014): 034108.
3. Phromsuwan, U., Sirisathitkul, Y., Sirisathitkul, C., Muneesawang, P. and Uyyanonvara, B. "Quantitative Analysis of X-Ray Lithographic Pores by SEM Image Processing" *MAPAN-Journal of Metrology Society of India* 28 (Dec 2013): 327-333.

BL8: XAS 22 articles

1. Bajamundi, C. J. E., Vainikka, P., Hyytiäinen, I., Korpijärvi, K., Lahtinen, M., Klysubun, W. and Konttinen, J. "Towards Controlling PCDD/F Production in a Multi-Fuel Fired BFB Boiler Using Two Sulfur Addition Strategies. Part III: Cu Speciation in the Fly ash" *Fuel* 132 (Sep 2014): 178-186.
2. Boonkerd, K. and Limphirat, W. "The Influence of Chemical Compounds on the Sulfur K-edge X-ray Absorption Near Edge Spectrum of the Vulcanized Rubber" *Advanced Materials Research* 905 (2014): 128-131.
3. Chaodamrongsakul, J., Klysubun, W. and Vao-soongnern, V. "Application of X-Ray Absorption Spectroscopy and Molecular Dynamics Simulation to Study the Atomistic Solvation Structure of Tetraglyme:KSCN Electrolytes" *Materials Chemistry and Physics* 143. 1 (2013): 1508-1516.
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5. Jutimoosik, J., Hunpratub, S., Maensiri, S., Rujirawat, S. and Yimnirun, R. "On Preferred Mn Site in Multiferroic BiFeO_3 : A View by Synchrotron X-ray absorption Near Edge Structure Spectroscopy" *Journal of Applied Physics* 116. 10 (Sep 2014): 104105.
6. Kamon-in, O., Buakeaw, S., Klysubun, W., Limphirat, W., Srilomsak, S. and Meethong, N. "A Study of Transient Phase Transformation in LFS/C using in-situ Time Resolved X-ray Absorption Spectroscopy" *International Journal of Electrochemical Science* 9 (2014): 4257-4267. Use BL8, BL2.2

7. Kanchiang, K., Pramchu, S., Yimnirun, R., Pakawanit, P., Ananta, S., and Loasiritaworn, Y. "Probing Local Structure of Pyrochlore Lead Zinc Niobate with Synchrotron X-ray Absorption Spectroscopy Technique" *Journal of Applied Physics* 114 (2013): 064103.
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13. Prasertsopha, N., Pinitsoontorn, S., Kamwanna, T., Kurosaki, K., Ohishi, Y., Muta, H. and Yamanaka, S. "Thermoelectric Properties of Ca₃Co₄ xGaxO_{9+d} Prepared by Thermal Hydro-decomposition" *Journal Electronic Materials* 43. 6 (Jun 2014): 2064-2071. **Use BL5, BL8**
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16. Roongtao, R., Baitahe, R., Vittayakorn, N., Seeharaj, P. and Vittayakorn, W. C. "Influence of Mn Doping on the Magnetic Properties of CoFe₂O₄" *Ferroelectrics* 459 (2014): 119-127.
17. Saisard, O., Somphon, W., Dungkaew, W. and Haller, K. J. "Evidence of a Lead Metathesis Product from Calcium Hydroxyapatite Dissolution in Lead Nitrate Solution" *Advanced in Materials Science and Engineering* v. 2014 ID.273632 6 pages
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19. Tangwatanakul, W., Sirisathikul, C., Jantaratanaand, P. and Limphirat, W. "Synchrotron X-ray Absorption of Iron Oxides Synthesised by Ultrasound-Assisted Co-Precipitation: Effects of Temperature and Surfactants" *Materials Research Innovations* 18. S2 (2014): 623-627.
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21. Wongmaneeung, R., Jantaratana, P., Yimnirun, R. and Ananta, S. "Phase Formation, Microstructure and Magnetic Properties of (1-x) BiFeO_{3-x}(0.9Pb(Mg_{1/3}Nb_{2/3})O₃-0.1PbTiO₃) System" *Ceramics International* 40. 1 pt.B (Jan 2014): 2299-2304.
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IR end station 6 articles

1. Buensanteai, N., Sompong, M., Saengchan, C. and Thumanu, K. "The Cellular Components of Cucumber Seedlings After Primed with Plant Growth Promoting Rhizobacteria, *Bacillus subtilis* Bs008" *African Journal of Microbiology Research* 8 (Mar 2014): 1006-1014.
2. Jantasee, A., Thumanu, K., Muangsan, N., Leeanansaksiri, W. and Maensiri, D. "Fourier Transform Infrared Spectroscopy for Antioxidant Capacity Determination in Colored Glutinous Rice" *Food Analytical Methods* 7. 2 (Feb 2014): 389-399.
3. Jittiarporn, P., Sikong, L., Koop-tarmond, K. and Taweepreda, W. "Effects of Precipitation Temperature on the Photochromic Properties of h-MoO₃" *Ceramics International* 40. 8 (Sep 2014): 13487-95. **Use BL3.2a, IR**
4. Srisayam, M., Weerapreeyakul, N., Barusrux, S., Tanhanuch, W. and Thumanu, K. "Application of FTIR Microspectroscopy for Characterization of Biomolecular Changes in Human Melanoma Cells Treated by Sesamol and Kojic Acid" *Journal of Dermatological Science* Journal of Dermatological Science 73. 3 (Mar 2014): 241-250.
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Others 3 articles

1. Chanlek, N., Herbert, J. D., Jones, R. M., Jones, L. B., Middleman, K. J. and Militsyn, B. L. "The Degradation of Quantum Efficiency in Negative Electron Affinity GaAs Photocathodes Under Gas Exposure" *Journal of Physics D: Applied Physics* 47 (2014): 055110.
2. Jandaruang, J., Siritapetawee, J., Songsirithitigul, C., Preecharram, S., Azuma, T., Dhiravisit, A., Fukumori, Y. and Thammasirirak, S. "Purification, Characterization, and Crystallization of *Crocodylus Siamensis* Hemoglobin" *Protein Journal* DOI 10.1007/s10930-014-9569-7 **In Press**
3. Na, H., Shin, T. J., Sim, K., Chirawatkul, P., kim, S., Heo, K. J., Kim, S. J. and Pyo, S. "Growth of n-type Organic Semiconductor for Low-Voltage Transistors Based on an ALD Grown Al₂O₃ Gate Dielectric" *Synthetic Metals* 185-186 (Dec 2013): 103-108.

Computer Materials Physics 1 articles

1. Wongprakarn, S., Prasongkit, J. and Srepusharawool, P. "Hydrogen Adsorption of Be-, Zn-, and Cd-zeolitic Imidazolate Framework-23: A Comparative Study" *Japanese Journal of Applied Physics* 53 (2014): 08NK03.

