

2013=2556 (Oct 2012 – Sep 2013)

BL1:TRXAS 1 articles

1. Poo-arporn, Y., Chirawatkul, P., Saengsui, W., Chotiwan, S., Kityakarn, S., Klinkhieo, S., Hormes, J. and Songsiriritthigul, P. "Time-Resolved XAS (Bonn-SUT-SLRI) Beamline at SLRI" *Journal of Synchrotron Radiation* 19 (Nov 2012): 937-943.

BL2.2:SAXS 7 articles

1. Hirun, N., Rugmai, S., Sangfai, T. and Tantishaiyakul, V. "SAXS and ATR-FTIR Studies on TSX-EBT Mixtures in their Sol-Gel Phases" *International Journal of Biological Macromolecules* 51.4 (Nov 2012): 423-430.
2. Koyvanich, K., Sirisathitkul, C. and Rugmai, S. "Effects of Cobalt Fillers on Polyurethane Segmentations Investigated by Synchrotron Small Angle X-Ray Scattering" *Advanced in Materials Science and Engineering* 2013 ID 493867 8 p.
3. Koyvanich, K., Chokprasombat, K., Sirisathitkul, C., Harding, P. and Rugmai, S. "Synchrotron Small Angle X-Ray Scattering Spectra of Iron-Based Magnetic Fluids" *Key Engineering Materials* 545 (2013): 31-35.
4. Rungswang, W., Phailahan, K., Saendee, P., Rugmai, s. and Cheevasrirungruang, W. "Tensile Deformation of In-Reactor Polymer Alloy with Preferentially Oriented Crystallite in Parallel and Perpendicular to Uniaxial Stretching Direction: A Model Case from Impact-Resistance Polypropylene Copolymer" *Polymer* 54.14 (Jun 2013): 3699-3708.
5. Rungswang, W., Saendee, P., Thitisuk, B., Pathaweeisariyakul, T. and Cheevasrirungruang "Role of Crystalline Ethylene-Propylene Copolymer on mechanical Properties of Impact Polypropylene Copolymer" *Applied Polymer* 128. 5 (Jun 2013): 3131-3140.
6. Siritapetawee, J., Sojikul, P., Soontaranon, S., Limphirat, W. and Thammasirak, S. "A Protein from Aloe vera that Inhibits the Cleavage of Human Fibrin(ogen) by Plasmin" *Applied Biochemistry and Biotechnology A* DOI 10.1007/s12010-013-0356-2
7. Sukwisute, P., Muensit, N., Soontaranon, S. and Rugmai, S. "Micropower Energy Harvesting Using Poly(vinylidene fluoride hexafluoropropylene)" *Applied Physics Letters* 103 (2013): 063905.

BL3.2Ua: PES 4 articles

1. Basri, S. H., Za'aba, N. K., Mohd Sarjidan, M. A. and Abd Majid, W. H. "Effect of Transition Metal Dopant on the Optoelectronics Properties of Zinc Oxide Thin Film" *Journal of Nanoelectronics and Optoelectronics* 8. 5 (Sep 2013): 425-430.
2. Masingboom, C., Eknapakul, T., Suwanwong, S., Buaphet, P., Nakajima, H., Mo, S.K., Thongbai, P., King, P.D.C., Maensiri, S. and Meevasana, W. "Anomalous Change in Dielectric Constant of CaCu₃Ti₄O₁₂ Under Violet-to-Ultraviolet Irradiation" *Applied Physics Letters* 102 (2013): 202903
Use BL3.2a, BL6a
3. Razali, R., Mohd Sarjidan, M. A., Za'aba, N. K., Basri, S. H. and Abd Majid, W. H. "One-Pot Synthesis of Ag Decorated ZnO Microsphere in Triethanolamine Media with Enhanced Photocatalytic Activity" *Journal of Nanoelectronics and Optoelectronics* 8. 5 (Sep 2013): 431-436.
4. Tippo, T., Thanachayanont, C., Nakajima, H., Songsiriritthigul, P., Hietschold, M. and Thanachayanont, A. "A Comparative Investigation of a Pentacene Layer on Gold and PMMA in Bottom-Contact Pentacene Thin Film Transistors" *Advanced Materials Research* 802 (2013): 27-31.

BL3.2b: PEEM 2 articles

1. Kanjanachuchai, S. and Euaruksakul, C. "Self-Running Ga Droplets on GaAs (111)A and (111)B Surface" *ACS Applied Materials & Interfaces* 5 (2013): 7709-7713.

2. Konkhunthot, N., Euaruksakul, C., Photongkam, P. and Wongpanya, P. "Characterization of Diamond-like Carbon (DLC) Films Deposited by Filtered Cathodic Vacuum arc Technique" *Journal of Metals, Materials and Minerals* 23.1 (2013): 35-40.

IR end station 6 articles

1. Buensanteai, N., Thumanu, K., Kooboran, K., Athinuwat, D. and Prathuangwong, S. "Biochemical Adaptation of Phytopathogenic Fungi, *Sclerotium Rolfsii*, in Response to Temperature Stress" *African Journal of Biotechnology* 11 (Oct 2012): 15082-15090.
2. Eumkeb, G., Siriwong, S. and Thumanu, K. "Synergistic Activity of Luteolin and Amoxicillin Combination Against Amoxicillin-Resistant *Escherichia Coli* and Mode of Action" *Journal of Photochemistry and Photobiology B: Biology* 117 (2012): 247-253.
3. Panitlertumpai, N., Nakbanpote, W., Sangdee, A., Thumanu, K., Nakai, I. and Hokura, A. "Zinc and/or Cadmium Accumulation in *Gynura Pseudochina* (L.) DC. Studied in Vitro and the Effect on Crude Protein" *Journal of Molecular Structure* 1036 (Mar 2013): 279-291. Use IR, BL8
4. Pongpiachan, S., Thumanu, K., Na Phatthalung, W., Tipmanee, D., Kanchai, P., Feldens, P. and Schwarzer, K. "Using Fourier Transform Infrared (FTIR) to Characterize Tsunami Deposits Near-Shore and Coastal Waters of Thailand" *Journal of Tsunami Society International* 32.1 (2013): 39-57.
5. Sompong, M., Thumanu, K., Prakhongka, I., Burapatpong, B., Athinuwat, D., Prathuangwong, S. and Buensanteai, N. "Infrared Spectroscopy: Methods for Investigating Cellular Components of Phytopathogenic Fungi Response to Temperature Stress" *African Journal of Microbiology Research* 7. 4 (Aug 2013): 4331-4337.
6. Ye, D., Tanthanuch, W., Thumanu, K., Sangmalee, A., Parnpai, R. and Heraud, P. "Discrimination of functional Hepatocytes derived from Mesenchymal Stem Cells Using FTIR Microspectroscopy" *Analyst* 137 (Oct 2012): 4774-4784.

BL5.2: XAS (SUT-Nanotec-SLRI) 1 article

1. Tangcharoen, T., Ruangphanit, A., Klysubun, W. and Pecharapa, W. "Sol-gel Combustion Synthesis and Characterizations of Nanocrystalline Zinc, Nickel and Nickel-Zinc Ferrites" *Advanced Materials Research* 802 (2013): 64-68.

BL6a: DXL 2 articles

1. Bijari, A., Keshmiri, S. H., Wanburee, W., Sriphung, C. and Phatthanakul, R. "Design and Fabrication of a Narrow-Bandwidth Micromechanical Ring Filter using a Novel Process in UV-LIGA Technology" *Iranian Journal of Electrical & Electronic Engineering* 8.4 (Dec 2012): 280-289.
2. Masingboom, C., Eknapakul, T., Suwanwong, S., Buaphet, P., Nakajima, H., Mo, S.K., Thongbai, P., King, P.D.C., Maensiri, S. and Meevasana, W. "Anomalous Change in Dielectric Constant of $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ Under Violet-to-Ultraviolet Irradiation" *Applied Physics Letters* 102 (2013): 202903
Use BL3.2a, BL6a

BL6b: XRF 3 articles

1. Dararutana, P., Won-In, K., Intarasiri, S., Kamwanna, T., Tancharakorn, S., Sirikulrat, N. and Hauzenberger, C. A. "X-Ray Spectrometry Study on Historical Decorative Glasses in Thailand: Lanna Style Glass" *Advanced Materials Research* 620 (2013): 330-334.
2. Pongpiachan, S., Thumanu, K., Tanthanuch, W., Tipmanee, D., Kanchai, P., Schwarzer, K. and Tancharakorn, S. "Sedimentary Features of Tsunami Backwash Deposits as Assessed by Micro-beam Synchrotron X-Ray Fluorescence (mu-SXRF) at the Siam Photon Laboratory" *Journal of Tsunami Society International* 32. 2 (2013)
3. Won-in, K., Sako, T., Thongleurm, C., Intarasiri, S., Tippawan, U., Kamwanna, T., Pattanasiriwisawa, W., Tancharakorn, S., Kamonsutthipajit, N. and Dararutana, P. "Nuclear Analytical Methods on Ancient Thai Rice" *Journal Radioanalytical and Nuclear Chemistry* 297 (2013): 285-290.

MX end station 3 articles

1. Fuengfuloy, P., Chuawong, P., Suebka, S., Wattanaamorn, P., Williams, C., Crump, M. P. and Songsiriritthigul, C. "Overproduction of the N-terminal Anticodon-binding Domain of the Non-discriminating Aspartyl-tRNA Synthetase from *Helicobacter pylori* for Crystallization and NMR Measurements" *Protein Expression and Purification* 89 (May 2013): 25-32.
2. Srisucharitpanit, K., Yao, M., Chimnarong, S., Promdonkoy, B., Tanaka, I. and Boonserm, P. "Crystallization and Preliminary X-ray Crystallographic Analysis of the Functional form of BinB Binary Toxin from *Bacillus sphaericus*" *Acta Crystallographica F* 69.2 (Feb 2013): 170-173.
3. Wang, J., Pengthaisong, S., Kettudat Cairns, J.R. and Liu, Y. "X-Ray Crystallography and QM/MM Investigation on the Oligosaccharide Synthesis Mechanism of Rice BGlu1 Glycosynthases" *Biochimica et Biophysica Acta* 1834 (2013): 536-545.

BL8: XAS 34 articles

1. Amnuyswat, K., Saributr, C., Thanomngam, P., Sungthong, A., Porntheeraphat, S., Sopitpan, S. and Nukeaw, J. "XAFS Analysis of Indium Oxynitride Thin Films Grown on Silicon Substrates" *X-Ray Spectrometry* 42.2 (Mar-Apr 2013): 87-92.
2. Bootchanont, A., Jutimoosik, J., Chandarak, S., Unruan, M., Rujirawat, S., Yimnirun, R., Guo, R. and Bhalla, A. "Investigation of Local Structure in BaTiO₃-BaZrO₃ System Synchrotron X-ray Absorption Spectroscopy" *Ceramics International* 39 (2013): S579-S582.
3. Chaodamrongsakul, J., Merat, K., Klysubun, W. and Vao-soongnern, V. "A Combined Molecular Dynamic Simulation and X-ray Absorption Spectroscopy to Investigate the Atomistic Solvation Structure of Cation in Poly(vinyl alcohol):Potassium Thiocyanate (KSCN) Solid Electrolytes" *Journal of Non-Crystalline Solids* 379 (2013) 21-26.
4. Chokprasombat, K., Sirisathitkul, C., Harding, P., Chandarak, S. and Yimnirun, R. "Monodisperse Magnetic Nanoparticles: Effects of Surfactants on the Reaction Between Iron Acetylacetonate and Platinum Acetylacetonate" *Revisita Mexicana de Fisica* 59 (May-Jun 2013): 224-228.
5. Chotiwan, S., Bungmek, W., Prangsri-aroo, S. and Viravathana, P. "XAS Study on Calcination Effect of Silica Supported Cobalt Catalysts for Fischer-Tropsch Synthesis" *Advanced Materials Research* 608-609 (2013): 1413-1418.
6. Chandarak, S., Jutimoosik, J., Bootchanont, A., Unruan, M., Jantaratanad P., Priya, S., Srilomsak, S., Rujirawat, S., and Yimnirun, R. "Local Structure of Magnetoelectric BiFeO₃-BaTiO₃ Ceramics Probed by Synchrotron X-Ray Absorption Spectroscopy" *Journal of Superconductivity and Novel Magnetism* 26.2 (Feb 2013): 455-461.
7. Daengsakul, S., Thomas, C., Mongkolkachit, C., Maensiri, S. "Synthesis and Structural Characterization of the La_{0.7}A_{0.3}MnO₃ (A = Sr, Ca, Ba and Na) Nanocrystalline Powders Prepared by a Simple Thermal Decomposition Route" *Journal of Superconductivity and Novel Magnetism* 25.7 (Oct 2012): 2507-2518.
8. Jiramongkolsiri, U., Thanomngam, P., Pankiew, A., Porntheerapat, S. and Nukeaw, J. "Surface Morphology and Structural Investigation of TiN Nanocrystal Thin Films Grown with Different N₂ Concentration" *Advanced Materials Research* 651 (2013): 91-96.
9. Junsawat, J., Phumthiean, N., Senthongkaew, P. and Achiwawanich, S. "Synthesis of Three-Dimensionally Ordered Macroporous Co/SiO₂ Catalysts by Sol-Gel Method" *Advanced Materials Research* 634-638 (2013): 620-623.
10. Kamon-in, O., Klysubun, W., Limphirat, W., Srilomsak, S. and Meethong, N. "An Insight into Crystal, Electronic, and Local Structures of Lithium Iron Silicate (Li₂FeSiO₄) Materials upon Lithium Extraction" *Physica B: Condensed* 416 (May 2013): 69-75.
11. Kangwankraiphaisan, T., Suntornvongsagul, K., Sihanonth, P., Klysubun, W. and Gadd, G.M. "Influence of Arbuscular Mycorrhizal Fungi (AMF) on Zinc Biogeochemistry in the Rhizosphere of *Lindenbergia philippensis* Growing in Zinc-Contaminated Sediment" *Biometals* 26.3 (Jun 2013): 489-505.

12. Khemthong, P., Daorattanachai, P., Laosiripojana, N. and Faungnawakij, K. "Copper Phosphate Nanostructures Catalyze Dehydration of Fructose to 5-hydroxymethylfurfural" *Catalysis Communications* 29 (Dec 2012): 96-100.
13. Kityakarn, S., Worayingyong, A., Suramitr, A. and Smith, M.F. "Ce-dope Nanoparticles of TiO₂: Rutile-to-Brookite Phase Transition and Evolution of Ce Local Structure Studied with XRD and XANES" *Materials Chemistry and Physics* 139. 2-3 (May 2013): 543-549.
14. Klysubun, W., Ravel, B., Klysubun, P., Sombunchoo, P. and Deenan, W. "Characterization of Yellow and Colorless Decorative Glasses from the Temple of the Emerald Buddha, Bangkok, Thailand" *Applied Physics A : Materials Science & Technology* 111.3 (Jun 2013): 775-782.
15. Klysubun, W., Sombunchoo, P., Deenan, W. and Kongmark, C. "Performance and Status of Beamline BL8 at SLRI for X-Ray Absorption Spectroscopy" *Journal of Synchrotron Radiation* 19 (2012): 930-936.
16. Mekprasart, W., Vittayakorn, N. and Pecharapa, W. "Ball-Milled CuPc/TiO₂ Hybrid Nanocomposite and its Photocatalytic Degradation of Aqueous Rhodamine B" *Materials Research Bulletin* 47. 11 (Nov 2012): 3114-3119.
17. Merat, K., Chaodamrongsakul, J., Tanthanuch, W. and Vao-soongnern, V. "Atomistic Solvation Structure of Calcium Ion in Poly(vinyl alcohol) as Studied by Molecular Dynamics Simulation and X-ray Absorption Spectroscopy" *Journal of Non-Crystalline Solids* 371-372 (Jul 2013): 47-52
18. Osakoo, N., Henkel, R., Loiha, S., Roessner, F. and Wittayakun, J. "Palladium Promoted Cobalt Catalysts Supported on Silica Prepared by Impregnation and Reverse Micelle for Fischer-Tropsch Synthesis" *Applied Catalysis A: General* 464-465 (Aug 2013): 269-280.
19. Panitlertumpai, N., Nakbanpote, W., Sangdee, A., Thumanu, K., Nakai, I. and Hokura, A. "Zinc and/or Cadmium Accumulation in *Gynura Pseudochina* (L.) DC. Studied in Vitro and the Effect on Crude Protein" *Journal of Molecular Structure* 1036 (Mar 2013): 279-291. [Use IR, BL8](#)
20. Paul, A., Paul, N., Jutimoosik, J., Yimnirun, R., Rujirawat, S., Hopfner, B., Lauermaun, I., Lux-Steiner, M., Mattauach, S. and Boni, P. "Change in Interface Magnetism of an Exchange-coupled System Due to the Presence of Nonmagnetic Specers" *Physical Review B* 87 (Jan 2013): 014431.
21. Phokha, S., Pinitsoontorn, S., Maensiri, S. "Room Temperature Ferromagnetism in Co-doped CeO₂ Nanospheres Prepared by the Polyvinylpyrrolidone-Assisted Hydrothermal Method" *Journal of Applied Physics* 112 (Dec 2012): 113904.
22. Phokha, S., Pinitsoontorn, S. and Maensiri, S. "Structure and Magnetic Properties of Monodisperse Fe³⁺-doped CeO₂ Nanospheres" *Nano-Micro Letters* 5.4 (2013): 223-233.
23. Prasoetsopha, N., Pinitsoontorn, S., Bootchanont, A., Kidkhunthod, P., Srepushawoot, P., Kamwanna, T., Amornkitbamrung, V., Kurosaki, K. and Yamanaka, S. "Local Structure of Fe in Fe-doped Misfit-Layered Calcium Cobaltite: an X-Ray Absorption Spectroscopy Study" *Journal of Solid State Chemistry* 204 (Aug 2013): 257-265.
24. Pongpiachan, S., Thumanu, K., Na Pattalung, W., Hirunyatrakul, P. and Kittikoon, I., Ho, K. F. and Cao, J. "Diurnal Variation and Spatial Distribution Effects on Sulfur Speciation in Aerosol Samples as Assessed by X-Ray Absorption Near-Edge Structure (XANES)" *Journal of Analytical Methods of Chemistry* vol. 2012 (2012), Article ID 696080, 10 pages doi:10.1155/2012/696080
25. Pongpiachan, S., Thumanu, K., Kositanont, C., Schwarzer, K., Prietzel, J., Hirunyatrakul, P. and Kittikoon, I. "Parameters Influencing Sulfur Speciation in Environmental Samples Using Sulfur K-Edge X-Ray Absorption Near-Edge Structure" *Journal of Analytical Methods of Chemistry* vol.2012 (2012), Article ID 659858, 12 pages doi:10.1155/2012/659858
26. Prietzel, J., Wu, Y., Dumig, A., Zhou, J. and Klysubun, W. "Soil Sulphur Speciation in Two Glacier Forefield Soil Chronosequences Assessed by S K-edge XANES Spectroscopy" *European of Journal of Soil Science* 64.2 (Apr 2013): 260-272.

27. Prietzel, J., Dümig, A., Wu, Y., Zhou, J. and Klysubun, W. "Synchrotron-based P K-edge XANES Spectroscopy Reveals Rapid Changes of Phosphorus Speciation in the Topsoil of Two Glacier Foreland Chronosequences" *Geochimica et Cosmochimica Acta* 108 (May 2013): 154-171.
28. Rattanapolsan, L., Nakbanpote, W. and Saensouk, P. "Metals Accumulation and Leaf Surface Anatomy of *Murdannia spectabilis* Growing in Zn/Cd Contaminated Soil" *EnvironmentAsia* 6.2 (2013): 71-82.
29. Siripornadulsil, S. and Siripornadulsil, W. "Cadmium-Tolerant Bacteria Reduce the Uptake of Cadmium in Rice: Potential for Microbial Bioremediation" *Ecotoxicology and Environmental Safety* 94.1 (Aug 2013): 94-103.
30. Taweepreda, W., Limphirat, W. and Songsiriritthigul, P. "Oxidative Degradation Monitoring of Natural Rubber Using S K-Edge X-Ray Absorption near-Edge Spectroscopy (XANES)" *Advanced Materials Research* 620 (2013): 440-445.
31. T-Thienprasert, J., Rujirawat, S., Klysubun, W., Duenow, J. N., Coutts, T. J., S. B. Zhang, S. B., D. C. Look, D. C. and Limpijumnong, S. "Compensation in Al-Doped ZnO by Al-Related Acceptor Complexes: Synchrotron X-Ray Absorption Spectroscopy and Theory" *Physical Review Letter* 110.5 (Feb 2013): 055502.
32. Tohsan, A., Phinyocheep, P., Kittipoom, S., Pattanasiriwisawa, W. and Ikeda, Y. "Novel Biphasic Structured Composite Prepared by *in Situ* Silica Filling in Natural Rubber Latex" *Polymers for Advanced Technologies* 23. 10 (Oct 2012): 1335-1342.
33. Tangwatanakul, W., Chokprasombat, K. and Sirisathitkul, C. "Annealing Effects on X-Ray Absorption Spectra of FePt-Based Magnetic Nanocrystals" *Nanoscience and Nanotechnology Letters* 5. 8 (Aug 2013): 921-925.
34. Zilner, E., Paul, A., Jutimoosik, J., Chandarak, S., Monnor, T., Rujirawat, S., Yimnirun, R., Lin, X. Z., Ennaoui, A., Dittrich, Th. and Lux-Steiner, M. "Lattice Positions of Sn in Cu₂ZnSnS₄ Nanoparticles and Thin Films Studied by Synchrotron X-ray Absorption Near Edge Structure Analysis" *Applied Physics Letters* 102. 22 (Jun 2013): 221908.

SR Related 1 article

1. Chaipayang, S., Heamatorn, N., Keha, L., Daduang, S., Songsiriritthigul, C., Swatsitang, P., Dhiravisit, A. and Thammasirirak, S. "Purification and Characterization of Ovotransferrin 4 from *Crocodylus siamensis*" *The Protein Journal* 32.2 (Feb 2013): 89-96.

