ANURAK PRASATKHETRAGARN Ph.D.

Workplace

School of Science,
University of Phayao

Address:
19 Moo 2, Pha-hol Yothin Road,
Maega District, Phayao, Thailand.

Phone:
+66 (0)64 4646 462

Email:
Anurak.pr@up.ac.th
AnurakUP@gmail.com

Languages

Thai

English

Awards

- University of Phayao Academic Outstanding Personnel in 2017
- Excellent Poster Award, The 8th Asian Meeting on Electroceramics (AMEC-8), 1-5 July 2012, Penang, Malaysia.

Current Position

Vice Dean

Research, Innovation and Academic Services Affair

Academic Position

Associate Professor

Experiences

- Vice Dean for Research and Quality Assurance Affair
- Vice Dean for Student Affair
- Head Department of Materials Science
- Reviewer for International Journal
- AUN-QA, CUPT-QA, MUA-QA and ONESQA Assessor Committee for Assessing Educational Quality at Curriculum and Institution Level

Educations

Doctor of Philosophy: **Materials Science** - 2008
Chiang Mai University, Thailand
Collaborated with **Oregon State University**, USA.

Master of Science: **Applied Physics** - 2005
Chiang Mai University, Thailand

Bachelor of Science: **Physics** - 2002
Naresuan University, Thailand

Specializations

- Nano- & Micro-Synthesis and characterization of dielectric, piezoelectric, ferroelectric and multiferroic materials.
- Electronics Circuit, Control and Data Acquisitions.

Certificates

- Diploma in teaching profession

Publications

1. **Prasatkhetragarn A**, Yimnirun R, Ananta S. Effects of calcination conditions on phase formation of zirconium titanate powders synthesized by the solid-state reaction. Ferroelectrics 2007; 356: 203-208. https://doi.org/10.1080/00150190701512367
2. **Prasatkhetragarn A**, Yimnirun R, Ananta S. Effect of calcination condition on phase formation and particle size of $Zn_3Nb_2O_8$ powders synthesized by solid-state reaction, Mater Lett 2007; 61: 2873-2877. https://doi.org/10.1016/j.matlet.2006.12.050
3. Unruan M, Vittayakorn N, Wongmaneeruang R, **Prasatkhetragarn A**, Ananta S, Yimnirun R. Synthesis and properties of $Pb(Co_{1/3}Nb_{2/3})O_3$ ceramics, J Alloy Compd 2008; 466, 264-267. https://doi.org/10.1016/j.jallcom.2007.11.071
4. Unruan M, **Prasatkhetragarn A**, Laosiritaworn Y, Ananta S, Yimnirun R. Dielectric properties of PZT-PCN ceramics under compressive stress, Phys Scripta 2008; 77: 571-574. https://iopscience.iop.org/article/10.1088/0031-8949/77/04/045702
5. **Prasatkhetragarn A**, Vittayakorn N, Ananta S, Yimnirun R, Cann D.P. Synthesis and dielectric and ferroelectric properties of ceramics in $(1-x)Pb(Zr_{1/2}Ti_{1/2})O_3 - (x)Pb(Co_{1/3}Nb_{2/3})O_3$ system. Jpn J Appl Phys 2008; 47: 998-1002. https://iopscience.iop.org/article/10.1143/JJAP.47.998/meta
6. **Prasatkhetragarn A**, Ananta S, Yimnirun R, Cann D.P. Effect of Thermal Treatment on Dielectric Properties of $0.8Pb(Zr_{1/2}Ti_{1/2})O_3$ - $0.2Pb(Co_{1/3}Nb_{2/3})O_3$ Ceramics. Adv Mater Res 2008; 55-57, 109-112. https://doi.org/10.4028/www.scientific.net/AMR.55-57.109
7. Unruan M, **Prasatkhetragarn A**, Laosiritaworn Y, Ananta S, Yimnirun R. Changes in the dielectric properties of $Pb(Zr_{1/2}Ti_{1/2})O_3$–$Pb(Co_{1/3}Nb_{2/3})O_3$ ceramics under compressive stress applied perpendicularly to the electric field. J. Phys. D: Appl. Phys. 41 (2008) 245405 (4pp). https://doi.org/10.1080/00150190902889424
8. **Prasatkhetragarn A**, Unruan M, Ngamjarurojana A, Laosiritaworn Y, Ananta S, Yimnirun R, Cann D.P. Effects of Zr/Ti Ratio on Dielectric and Ferroelectric Properties of $0.8Pb(Zr_xTi_{1-x})O_3 - 0.2Pb(Co_{1/3}Nb_{2/3})O_3$ Ceramics. Curr Appl Phys (2009); 9: 802-806. https://doi.org/10.1016/j.cap.2008.07.019
9. **Prasatkhetragarn A**, Unruan M, Ngamjarurojana A, Laosiritaworn Y, Ananta S, Yimnirun R, Cann D.P. Dielectric and Ferroelectric Properties of 0.8PZT–0.2PCN Ceramics under Sintering Condition Variation. Curr Appl Phys (2009); 9: 1165-1169. https://doi.org/10.1016/j.cap.2009.01.005
10. Huang C. C, Vittayakorn N, **Prasatkhetragarn A**, and Cann D. P. Phase Transitions and Dielectric Properties in $Bi(Zn_{1/2}Ti_{1/2})O_3$–$(Na_{1-y}Li_y)NbO_3$ Perovskite Solid Solutions. Jpn J Appl Phys 48 (2009) 031401. https://iopscience.iop.org/article/10.1143/JJAP.48.031401/meta
11. **Prasatkhetragarn A**, Ketsuwan P, Ananta S, Yimnirun R, Cann D.P. Phase Formation, Microstructure, and Dielectric Properties of (1-x)PZT–(x)PCN Ceramics. Mater Lett 63 (2009) 1281-1284. https://doi.org/10.1016/j.matlet.2009.02.063
12. Unruan M, **Prasartketrakarn A**, Ngamjarurojana A, Laosiritaworn Y, Ananta S, and Yimnirun R. Dielectric and ferroelectric properties of lead zirconate titanate-lead nickel niobate ceramic under compressive stress. J. Appl. Phys. 105 (2009) 084111. https://doi.org/10.1063/1.3106659

Publications

13. **Prasatkhetragarn A**, Ketsuwan P, Unruan M, Ngamjarurojana A, Laosiritaworn Y, Ananta S, Yimnirun R, Cann D.P. Effects of Zr/Ti Ratio on Phase Formation and Dielectric Properties of $0.8Pb(Zr_xTi_{1-x})O_3 - 0.2Pb(Co_{1/3}Nb_{2/3})O_3$ Ceramics. Ferroelectrics (2009); 380: 122-129. https://doi.org/10.1080/00150190902876355
14. **Prasatkhetragarn A**, Ketsuwan P, Unruan M, Ngamjarurojana A, Laosiritaworn Y, Ananta S, Yimnirun R, Cann D.P. Effects of Sintering Conditions on Phase Formation and Dielectric Properties of $0.8Pb(Zr_{1/2}Ti_{1/2})O_3 - 0.2Pb(Co_{1/3}Nb_{2/3})O_3$ Ceramics. Ferroelectrics (2009); 382: 100-109. https://doi.org/10.1080/00150190902869954
15. Ketsuwan P, **Prasatkhetragarn A**, Triamnuk N, Huang C.C, Ngamjarurojana A, Ananta S, Cann D.P, Yimnirun R. Electrical Conductivity and Dielectric and Ferroelectric Properties of Chromium Doped Lead Zirconate Titanate Ceramic. Ferroelectrics (2009); 382: 49-45. https://doi.org/10.1080/00150190902881546
16. Ketsuwan P, **Prasatkhetragarn A**, Triamnuk N, Huang C.C, Ngamjarurojana A, Ananta S, Cann D.P, Yimnirun R. Effects of Niobium Doping on Dielectric and Ferroelectric Properties of Chromium Modified Lead Zirconate Titanate Ceramics. Ferroelectrics (2009); 380: 183-189. https://doi.org/10.1080/00150190902880365
17. **Prasatkhetragarn A**, Ketsuwan P, Maensiri S, Yimnirun R, Huang C-C, and Cann D.P, Structure and Electrical Properties of Double Perovskite $Sr(Ni_{1/2}Mo_{1/2})O_3$ Ceramics. J. Appl. Phys. (2009); 106: 094105. https://doi.org/10.1063/1.3212978
18. Ketsuwan P, **Prasatkhetragarn A**, Ananta S, Huang C-C, Cann D.P and Yimnirun R, Dielectric Properties of $Bi_{0.2}K_{0.8}(Zn_{0.1}Ti_{0.1})Ta_{0.8}O_3$ Ceramics. Key Eng. Mater. (2010); 421-422: 255-258. https://doi.org/10.4028/www.scientific.net/KEM.421-422.255
19. Ketsuwan P, **Prasatkhetragarn A**, Ananta S, Huang C-C, Cann D.P and Yimnirun R, Dielectric and Ferroelectric Properties of (Cr,Nb)-doped Lead Zirconate Titanate Ceramics. Key Eng. Mater. (2010); 421-422: 385-388.
DOI: https://www.scientific.net/KEM.421-422.385
20. **Prasatkhetragarn A**, Ketsuwan P, Ananta S, Yimnirun R, Effects of vibro-milling time on phase formation and particle size of $Zn_3Nb_2O_8$ nanopowders. Mater. Lett. (2010); 64: 1113-1116. https://doi.org/10.1016/j.matlet.2010.01.088
21. **Prasatkhetragarn A**, Synthesis and dielectric properties of $0.9Pb(Zr_{1/2}Ti_{1/2})O_3$–$0.1Pb(Fe_{1/3}Nb_{2/3})O_3$ ceramics. Ferroelectrics (2011) 416: 35–39. https://doi.org/10.1080/00150193.2011.577661
22. **Prasatkhetragarn A**, Saenarpa R, Yotburut B, Ketsuwan P, Sareein T, Ananta S, and Yimnirun R, Investigations on morphology and ferroelectric properties of $NaNbO_3$–$PbTiO_3$ composite ceramics. Ferroelectrics (2011) 416: 40–46. https://doi.org/10.1080/00150193.2011.577664
23. **Prasatkhetragarn A**, Yotburut B, Triamnak N, Yimnirun R and Cann D.P, Synthesis and electrical properties of lead free $(Bi_{0.5}K_{0.5})TiO_3$–$BaTiO_3$–$Bi(Zn_{0.5}Ti_{0.5})O_3$ ceramics. Ceram. Int. (2012) 38 827–830. https://doi.org/10.1016/j.ceramint.2011.07.063
24. **Prasatkhetragarn A**, Kaowphong S and Yimnirun R, Synthesis, structural and electrical properties of double perovskite Sr_2NiMoO_6 ceramics. Appl Phys A. (2011). DOI: https://rd.springer.com/article/10.1007%2Fs00339-011-6744-y

Publications

25. Unruan M, **Prasatkhetragarn A**, Yimnirun R, Guo R and Bhalla A, Estimation of Total Polarization and Thermal Expansion Behavior in PZT-PCN Ceramics. Integrated Ferroelectrics. (2011) 131: 140–146. https://doi.org/10.1080/10584587.2011.616439
26. Unruan M, **Prasatkhetragarn A**, Laosiritaworn Y, Ananta S, Ngamjarurojana A, Yimnirun R, Guo R and Bhalla A, Measurement of thermal strain and total polarization estimation of lead zirconate titanate–lead zinc niobate ceramics. J Mater Sci (2012) 47: 5801–5805. https://link.springer.com/article/10.1007/s10853-012-6479-y
27. **Prasatkhetragarn A** and Yimnirun R, Phase Formation, Electrical Properties and Morphotropic Phase Boundary of $0.95Pb(Zr_xTi_{1-x})O_3–0.05Pb(Mn_{1/3}Nb_{2/3})O_3$ Ceramics. Ceram. Int. (2013) 39: S91-S95. https://doi.org/10.1016/j.ceramint.2012.10.041
28. **Prasatkhetragarn A**, Arthan A, Jantaratana P, Vittayakorn N, Yotburut B and Yimnirun R, Ferroelectromagnetic characteristic of Na-doped $0.75BiFeO_3$-$0.25BaTiO_3$ multiferroic ceramics. Ceram. Int. (2013) 39: S245-S248. https://doi.org/10.1016/j.ceramint.2012.10.070
29. **Prasatkhetragarn A**, Muangkonkad P, Aommongkol P, Jantaratana P, Vittayakorn N and Yimnirun R, Investigation on ferromagnetic and ferroelectric properties of (La,K)-doped $BiFeO_3$-$BaTiO_3$ solid solution. Ceram. Int. (2013) 39: S249-S252. https://doi.org/10.1016/j.ceramint.2012.10.071
30. Pakawanit P, Ngamjarurojana A, **Prasatkhetragarn A**, and Ananta S, Characterization of $0.93Pb(Zn_{1/3}Nb_{2/3})O_3–0.07BaTiO_3$ ceramics derived from a novel $Zn_3Nb_2O_8$ B-site precursor. Ceram. Int. (2013) 39: S325-S329. https://doi.org/10.1016/j.ceramint.2012.10.087
31. **Prasatkhetragarn A**, Jantaratana P, Vittayakorn N, Yotburut B and Yimnirun R, Ferroelectric and Ferromagnetic Properties of K-doped $0.7BiFeO_3–0.3BaTiO_3$ Multiferroic Ceramics. Ferroelectrics (2013) 451(1); 109-115. https://doi.org/10.1080/00150193.2013.839282
32. Pakawanit P, Ngamjarurojana A, **Prasatkhetragarn A** and Ananta S, Comparative Studies of Mixed-oxide Synthetic Routes for the Production of Ferroelectric PZN-based Ceramics. Ferroelectrics (2013) 454(1); 84-90. https://doi.org/10.1080/00150193.2013.842822
33. Chandarak S, Unruan M, **Prasatkhetragarn A**, and Yimnirun R, Structural Investigation of PZT-PNN and PZT-PZN Probed by Synchrotron X-ray Absorption Spectroscopy. Ferroelectrics (2013) 455(1); 117-122. https://doi.org/10.1080/00150193.2013.845485
34. Ketsuwan P, **Prasatkhetragarn A**, Ngamjarurojana A, Ananta S, Yimnirun R. Dielectric aging of Cr-doped PZT ceramics. Integrated Ferroelectrics 2013; 149(1), 67-74. https://doi.org/10.1080/07315171.2013.853561
35. Ketsuwan P, **Prasatkhetragarn A**, Ngamjarurojana A, Ananta S, Yimnirun R. Aging behavior of (Cr,Nb)-doped PZT ceramics. Ferroelectrics 2013; 452(1), 13-21. https://doi.org/10.1080/00150193.2013.839300

Publications

36. **Prasatkhetragarn A**, Yimnirun R. Phase formation, electrical properties and morphotropic phase boundary of $0.95Pb(Zr_xTi_{1-x})O_3–0.05Pb(Mn_{1/3}Nb_{2/3})O_3$ ceramics. Ceramics International 2013; 39: S91-S95. https://doi.org/10.1016/j.ceramint.2012.10.041
37. **Prasatkhetragarn A**, Triamnak N, Yimnirun R, Cann DP. Morphotropic Phase Boundary of $0.875Pb(Zr_xTi_{1-x})O_3–0.125Pb(Mg_{1/3}Nb_{2/3})O_3$ Ceramics. Ferroelectrics 2014; 470 (1): 280-286. https://doi.org/10.1080/10584587.2014.923737
38. **Prasatkhetragarn A**, Ngamjarurojana A, Yimnirun R. Relaxor-like behavior and ferroelectric evolution in (1-x)[0.5BZT–0.5PT] – (x)BKT ternary system. Integrated Ferroelectrics 2016; 175: 81-86. https://doi.org/10.1080/10584587.2016.1201395
39. **Prasatkhetragarn A**, Sriboonpeng C, Jantaratana P, Vittayakorn N, Thammajak N, Jutimoosik J, Maensiri S, Yimnirun R. Local Structure, Electrical and Magnetic Properties of Fe-doped $Sr_2(Ni,Mo)O_6$ Double Perovskite. Ceramics International 2017; 43: S140-S144. https://doi.org/10.1016/j.ceramint.2017.05.186
40. Kaewmuang P, Pudkon W, **Prasatkhetragarn A**, Nimmanpipug P, Kittiwachana S, Kaowphong S. Comparison of Sizes, Morphologies and Optical Properties of NiO Nanostructures Synthesized Using Acetate and Nitrate Anions from Nickel Salts via Hydrothermal Method. Chiang Mai J. Sci. 2018; 45(2): 1122-1128. http://www.thaiscience.info/Journals/Article/CMJS/10989366.pdf
41. **Prasatkhetragarn A**, Phetphum N, Bongkarn T, Vittayakorn N, Maensiri S, Yimnirun R. Physical and piezoelectric properties of ceramics in the $(K_{0.5}Na_{0.5})NbO_3–Bi(Zn_{0.5}Ti_{0.5})O_3–PbTiO_3$ system. Materials Today: Proceedings (2018); 5: 10990-10996. https://doi.org/10.1016/j.matpr.2018.01.014
42. **Prasatkhetragarn A**, Yimnirun R, Ren J. Normal/relaxor ferroelectric characteristics of lead-based PZT–PXN ceramics using columbite/wolframite precursors method. Ferroelectrics. (2019); 552: 165-171. https://doi.org/10.1080/00150193.2019.1653093
43. **Prasatkhetragarn A**, Jutimoosik J, Jantaratana P, Kidkhunthod P, Yimnirun R, and Ren J. Identification of Barium-Site Substitution of $BiFeO_3$-$Bi_{0.5}K_{0.5}TiO_3$ Multiferroic Ceramics: X-ray Absorption Near Edge Spectroscopy. Radiation Physics and Chemistry (2019). Radiation Physics and Chemistry (2020); 170: 108621. https://doi.org/10.1016/j.radphyschem.2019.108621
44. Jutimoosik J, Jantaratana P, Yimnirun R, **Prasatkhetragarn A.** Phase Formation, Morphology and Magnetic Properties of $PbTiO_3–Fe_2O_3$ Heterostructure Ceramics. Integrated Ferroelectrics (2021); 214: 19-24. https://doi.org/10.1080/10584587.2020.1857174
45. Kaowphong S, Chachvalvutikul A, Hongsith N, Ren J, and **Prasatkhetragarn A**. Synthesis of NiO Nanostructures by Sonocatalyzed Microwave Irradiation Technique and Their Acetone Sensing Properties. Integrated Ferroelectrics (2021); 214: 205-216. https://doi.org/10.1080/10584587.2020.1857197

Publications

46. Wantana N, Ruangtaweep Y, Kaewnuam E, Kothan S, Kim H.J, **Prasatkhetragarn A**, Kaewkhao J. Strong emission from Ce3+ doped gadolinium oxyfluoroborate scintillation glasses matrix. Radiation Physics and Chemistry (2021); 185: 109496. https://doi.org/10.1016/j.radphyschem.2021.109497
47. Yodkantee D, **Prasatkhetragarn A**, Chanthima N, Tariwong Y, Kothan S, Rujirawat S, Yimnirun R, Kidkhunthod P, Kim H.J, Limsuwan P, Kaewkhao J. Luminescence and physical properties of Ce^{3+}-doped potassium gadolinium phosphate glasses for radiation detector application. Radiation Physics and Chemistry (2021); 185: 109497. https://doi.org/10.1016/j.radphyschem.2021.109496
48. Rittisut W, Wantana N, Butburee A, Ruangtaweep Y, Padchasri J, Rujirawat S, Manyum P, Kidkhunthod P, Yimnirun R, Kothan S, Kim H.J, **Prasatkhetragarn A**, Kaewkhao J. Luminescence properties of Ce^{3+}-doped borate scintillating glass for new radiation detection material. Radiation Physics and Chemistry (2021); 185: 109498. https://doi.org/10.1016/j.radphyschem.2021.109498
49. Jomkaew T, Chaiphaksa W, Limkitjaroenporn P, Kim H.J, Kothan S, **Prasatkhetragarn A**, Kaewkhao J. Photon interaction and electron nonproportional response of CLYC scintillation material. Radiation Physics and Chemistry (2021); 188: 109565. https://doi.org/10.1016/j.radphyschem.2021.109565
50. Kiwsakunkran N, Chaiphaksa W, Chanthima N, Kim H.J, Kothan S, **Prasatkhetragarn A**, Kaewkhao J. Fabrication of $K_2O–Al_2O_3–Gd_2O_3–P_2O_5$ glasses for photonic and scintillation materials applications. Radiation Physics and Chemistry (2021); 188: 109639. https://doi.org/10.1016/j.radphyschem.2021.109639
51. Rittisut W, Wantana N, Ruangtaweep Y, Rujirawat S, Manyum P, Yimnirun R, Kidkhunthod P, **Prasatkhetragarn A**, Kothan S, Kim H.J, Kaewkhao J. Optical Materials (2021); 121: 111437. https://doi.org/10.1016/j.optmat.2021.111437
52. Hongsith N, Wongrat E, **Prasatkhetragarn A**. Growth and size control of ZnO nanotetrapods prepared by current heating technique. Suranaree Journal of Science & Technology (2021); 28(6): 1-5.
53. Jomkaew T, Chaiphaksa W, Siengsanoh K, Limkitjaroenporn P, Kedkaew C, Kim H.J, Kothan S, **Prasatkhetragarn A**, Kaewkhao J. Electron and photon responses of CWO scintillation crystal. Radiation Physics and Chemistry (2021); 189: 109749. https://doi.org/10.1016/j.radphyschem.2021.109749
54. Rittisut W, Wantana N, Ruangtaweep Y, Padchasri J, Rujirawat S, Manyum P, Yimnirun R, Kidkhunthod P, **Prasatkhetragarn A**, Kothan S, Kim H.J, Kaewkhao J. Bright white light emission from (Gd^{3+}/Dy^{3+}) dual doped transparent lithium aluminum borate glasses for W-LED application. Optical Materials (2021); 122: 111705. https://doi.org/10.1016/j.optmat.2021.111705
55. Singkiburin N, Srisittipokakun N, Sangsawat Y, Boonpa W, Kim H.J, **Prasatkhetragarn A**, Rajagukguk J, Thowladda W, Kaewkhao J. Effect of Soaking Time and Sb_2O_3 Concentration on Number of Bubble and Optical Properties of Borosilicate Glasses. Integrated Ferroelectrics (2021); 223(1): 10-17. https://doi.org/10.1080/10584587.2021.1964280

Publications

56. Sirirak R, Chaopanich P, **Prasatkhetragarn A**, Chailuecha C, Kuimalee S, Klinbumrung A. Doping effect of Zn on structural and optical properties of CuO nanostructures prepared by wet chemical precipitation process. Radiation Physics and Chemistry (2022); 190: 109788. https://doi.org/10.1016/j.radphyschem.2021.109788
57. Thongyoy P, Kedkaew C, Meejitpaisan P, Chanthima N, **Prasatkhetragarn A**, Kaewkhao J. Spectroscopic Properties of Er^{3+} Doped Li_2O-Al_2O_3-BaO-P_2O_5 and Na_2O-Al_2O_3-BaO-P_2O_5 Glasses for Fiber Optic Communication Material. Integrated Ferroelectrics (2022); 222(1): 262-272. https://doi.org/10.1080/10584587.2021.1961538
58. **Prasatkhetragarn A**, Sareein T, Triamnak N, Yimnirun R. Dielectric and ferroelectric properties of modified-$BaTiO_3$ lead-free ceramics prepared by solid solution method. Ferroelectrics (2022); 586(1): 224-241. https://doi.org/10.1080/00150193.2021.2014274
59. *Another Article will be updated*.