

Name: Atitsa Petchsuk

Nationality: Thai

Gender: Female

Status: single

DOB: 02/01/1970

Current position: Researcher

Address: National Metal and Materials Technology Center, 114 Thailand
Science Park, Klong 1, Klong Luang, Pathumtani, 12120, tel. 662-
564-6500 ext. 4427, Fax (662)564-6445



Education:

1992 B.Sc. in Chemistry, Prince of Songkla University, Songkla,
Thailand.

1999 M.S. in Materials Science & Engineering (Polymer), The
Pennsylvania State University, Pennsylvania, USA.

2003 Ph.D. in Materials Science & Engineering (Polymer), The
Pennsylvania State University, Pennsylvania, USA.

Publications:

1. Sukpuang p., Opaprakasit M., **Petchsuk A.**, Tangboriboonrat P., Sojikul P. and Opaprakasit P. Polylactic acid Glycolysate as a Crosslinker for Epoxidized Natural Rubber: Effect of Cross-linker Molecular Weight”, *Journal of Elastomers & Plastics*, 2014, 1-17
2. Sriromreum P., **Petchsuk A.**, Opaprakasit M., Opaprakasit O., Miscibility and hydrolytic degradability of Polylactic acid/poly(ethylene terephthalate-co-lactic acid) Blends, *Chiang Mai J. Sci* 2014; v. 41(3), 691-703.
3. **Petchsuk A.**, Buchatip S., Supmak W., Opaprakasit M., Opaprakasit O., Preparation and properties of multi-branched poly(D-lactide) derived from polyglycidol and its stereocomplex blends, *eXPRESS Polymer Letters* 2014; v. 8(10), 779-789.
4. Sukpuang P., Opaprakasit M., **Petchsuk A.**, Opaprakasit O., Toughness enchanement of polylactic acid by employing glycolyzed polylactic acid-cured epoxidized natural rubber, *Advanced Materilas Research* 2014; v. 1025-1026, 580-584.
5. Tounthai J., **Petchsuk A.**, Opaprakasit P., Opaprakasit M., Curable polyester precursors from polylactic acid glycolyzed products, *Polymer Bulletin* 2013; v. 70, 2223–2238.
6. Sriromreun P., **Petchsuk A.**, Opaprakasit , M, and Opaprakasit P., Standard methods for characterizations of structure and hydrolytic degradation of

aliphatic/aromatic copolyesters, *Polymer Degradation and Stability* 2013; v. 98, 169–176.

7. Nguyen T.H., Tangboriboonrat P., Rattanasom N., **Petchsuk A.**, Opaprakasit M., Thammawong C., Opaprakasit P., Polylactic Acid/Ethylene Glycol Triblock Copolymer as Novel Crosslinker for Epoxidized Natural Rubber, *J. Appl. Polym. Sci* 2012; v. 124, 164-174.
8. Thammawong C., Sreearunothai P., **Petchsuk A.**, Tangboriboonrat P., Pimpha N., Opaprakasit P. Preparation and Characterizations of Naproxen-Loaded Magnetic Nanoparticles Coated with PLA-g-Chitosan Copolymer, *J. Nanopart. Res.*, Published online DOI 10.1007/s11051-012-1046-7 (2012).
9. **Petchsuk A.**, Submak W., Opaprakasit P. Development of Crosslinkable poly(lactic acid-co-glycidyl methacrylate) copolymer and their Curing Behavior. *Polym. J.*, 1-7 (2012).
10. **Petchsuk A.**, Klinsukhona W., Sirikittikula D., Prahsarn C. Parameters affecting transition temperatures of poly(lactic acid-co-polydiols) copolymer-based polyester urethanes and their shape memory behavior, *Polym. Adv. Tech*, 23(8), 1166-1173 (2012).
11. Opaprakasit M., Kongtong W., **Petchsuk A.**, Opaprakasit P. Processability enhancement of poly(lactic acid-coethylene terephthalate) by blending with poly(ethyleneco- vinyl acetate), poly(3-hydroxybutyrate-co-3-hydroxyvalerate), and poly(butylene succinate), *Polym. Bull.*, **67**, 275-290 (2011).
12. **Petchsuk A.**, Supmak W., Thanaboonsombut A. Effects of Size of Spray-dried PZT Powder and Dipole Density of Polymer Matrix on the Electrical Properties of PZT/Odd-odd Nylons 0-3 Composites, *J. Am. Ceram. Soc.*, 94(7), 2126-2134 (2011).
13. Nguyen TH., Tangboriboonrat P., Rattanasom N., **Petchsuk A.**, Opaprakasit M., Thammawong C., Opaprakasit P. Polylactic Acid/Ethylene Glycol Triblock Copolymers as Novel Crosslinkers for Epoxidized Natural Rubber, *J. App. Polym. Sci.*, 124, 164-174 (2011).
14. Opaprakasit M., Kongtong W., **Petchsuk A.**, Opaprakasit P. Processability enhancement of poly(lactic acid-coethylene terephthalate) by blending with poly(ethyleneco- vinyl acetate), poly(3-hydroxybutyrate-co-3-hydroxyvalerate), and poly(butylene succinate), *Polym. Bull.*, **67**, 275-290 (2011).
15. Namkajorn M., **Petchsuk A.**, Opaprakasit M., Opaprakasit P. Synthesis and characterizations of degradable aliphatic-aromatic copolyesters from lactic acid, dimethyl terephthalate and diol: Effects of diol type and monomer feed ratio, *eXPRESS Polymer Letters*, **4** (7), 415–422(2010).
16. **Petchsuk A.**, Nakayama A., Aiba S. Synthesis and Biodegradability of L-Lactide/glycidol copolymers, *Polymer Degradation and Stability*, **94**, 1700(2009).
17. **Petchsuk A.**, Supmak W., Thanaboonsombut A. A Series of 0-3 Composites of Lead Zirconate Titanate and Ferroelectric Nylon77: Preparation and Electrical Properties, *Journal of Applied Polymer Science*, **114**, 1048(2009).

18. Opaprakasit M., **Petchsuk A.**, Opaprakasit P., Chongprakobkit S. Effects of Synthesis Conditions on Chemical Structures and Physical Properties of Copolyesters from Lactic acid, Ethylene glycol and Dimethyl terephthalate, *eXPRESS Polymer Letters*, **3**(7), 458(2009).
19. Supmak W., **Petchsuk A.**, Thanaboonsombut A. Influence of Ceramic Particle Sizes on Electrical Properties of Lead Zirconate Titanate (PZT)/Nylon57 Composites, *Journal of Metals, Materials and Minerals*, **18**, 147(2008).
20. Buchatip S., **Petchsuk A.**, Kongsuwan K. Synthesis and Mechanical Properties of Poly(LLA-co-DLLA) Copolymers, *Journal of Metals, Materials and Minerals*, **18**, 175(2008)
21. Jintakanon N., Opaprakasit P., **Petchsuk A.**, Opaprakasit M. Controlled-release materials for fertilizer based on lactic acid polymers, *Advanced Materials Research*, **55-57**, 905(2008).
22. Namkajorn M., **Petchsuk A.**, Opaprakasit M., Opaprakasit P. Synthesis and Characterization of PLA-based aliphatic-aromatic copolyesters: effect of diols, *Advanced Materials Research*, **55-57**, 785(2008).
23. Sriromreun P., Opaprakasit M., **Petchsuk A.**, Opaprakasit P. Synthesis and characterization of degradable poly(ethylene terephthalate-co-lactic acid) and its blends, *Advanced Materials Research*, **55-57**, 789(2008).
24. Opaprakasit P., **Petchsuk A.**, Painter PC., Malkov S. Dynamic 2D-FTIR spectroscopic studies of Poly(vinylidene fluoride-trifluoroethylene-chlorotrifluoroethylene), P(VDF-TrFE-CTFE) terpolymer, *Chaingmai Journal of science*, **32**(3), 515 (2005).
25. Z. Yu, C. Ang, L. E. Cross, **A. Petchsuk** and T. C. Chung: Dielectric and electrostrictive strain of poly(vinylidene fluoride-trifluoroethylene-chlorotrifluoroethylene) terpolymers, *Applied Physics Letters*, **84**(10), 1737 (2004).
26. J. T. Garrett, C. M. Roland, **A. Petchsuk** and T. C. Chung: Electrostrictive behavior of poly(vinylidene fluoride-trifluoroethylene-chlorotrifluoroethylene), *Applied Physics Letters*, **83**(6), 1190 (2003).
27. T. C. Chung and **A. Petchsuk**: Synthesis and Properties of Ferroelectric Fluoropolymers with Curie Transition at Ambient Temperature, *Macromolecules*, **35**, 7678 (2002).
28. T. C. Chung and **A. Petchsuk**: Semicrystalline Ferroelectric Fluoropolymers and Process for preparing same, US. Patent **6,355,749**.
29. G. S. Buckley, C. M. Roland, R. Casalini, **A. Petchsuk** and T. C. Chung: Electrostrictive properties of poly(vinylidene fluoride-trifluoroethylene-chlorotrifluoroethylene), *Chemistry of Materials*, **14**, 2590 (2002).
30. T. C. Chung and **A. Petchsuk**: Polymers, Ferroelectric, *Encyclopedia of Physical Science and technology*, 3rd Ed., Vol.12, 2002, Academic press.
31. T. C. Chung and **A. Petchsuk**: Ferroelectric VDF/TrFE/CTFE Terpolymers: Synthesis and electrical properties, *Electroactive Polymer Actuator and Devices, Proceedings of SPIE*, **117**, 4329 (2001).

32. T. C. Chung and **A. Petchsuk**: Ferroelectric Polymer of VDF/TrFE/CTFE with High Dielectric Constant and Large Electrostrictive Strain, *Ferroelectric Letters*, **28** (5-6), 135 (2001).
33. **A. Petchsuk** and T. C. Chung: Synthesis and Electrical Properties of VDF/TrFE/HFP with Curie Temperature Close to Ambient Temperature, *Mat.Res.Symp.*, **600**, 55 (2000).

Others:

1. Ph.D dissertation “Ferroelectric Terpolymers, Based on Semicrystalline VDF/TrFE/Chloro-containing Terpolymers: Synthesis, Electrical Properties and Functionalization Reactions”
2. MS. Thesis, “Ferroelectric VDF/TrFE/HFP Terpolymer with High electromechanical Properties at Ambient Temperature

Interests: Piezoelectric polymer and devices, polymer composite, biosensors, biodegradable polymers

Skills: Polymer synthesis and chemical reactions, characterization of electrical properties (strain, polarization, dielectric constant etc.)

Experiences:

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| 1997 | Teaching assistant for “Polymer Synthesis” at Petroleum and Petrochemical College, Chulalongkorn University, Thailand. |
| 2000-01 | Lecturer for “Polymer Synthesis Lab” at Pennsylvania State University, USA. |
| 2003 | Lecturer for “Chemistry Lab SCS 176” at Thammasat University, Thailand. |
| 2008 | Training in “Research on Standards, Measurements, Evaluations and Geoscience for industry” for 6 months at Japan |

Ongoing research topics:

1. Development of UV-filtration, NIR-reflection and light diffusion multi-functional film for greenhouse: funding from MTEC.