

CURRICULUM VITAE
PROFESSIONAL DOSSIER

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Education (Degree/Place/Year of Graduation): _____

Ph.D. (Applied Fine Chem., Functional Polymer)/Osaka University, Japan/1995

M. Eng. (Applied Fine Chem., Functional Polymer)/Osaka University, Japan/1991

B. Eng. (Applied Fine Chem.)/Osaka University, Japan/1989

Professional Experience:

July 2012 - Present President of Polymer Society of Thailand

Oct. 2009 - Present Professor in Polymer Science and Engineering, The Petroleum and Petrochemical College, Chulalongkorn University

Oct. 2007- Sep. 2008 Associate Dean of Research Affairs, The Petroleum and Petrochemical College, Chulalongkorn University

Oct. 2004 - Oct. 2007 Deputy Director of Research Affairs, The Petroleum and Petrochemical
College, Chulalongkorn University

Jun. 2002 - Present Vice Center-Head, Center for Chitin-Chitosan Biomaterials,
Chulalongkorn University

Honors and Awards:

1. รางวัลอาจารย์ดีเด่นแห่งชาติ (ปอ.มท.), 2013
 2. PTIT Innovation Award, 2011.
 3. Best National Researcher: Chemical and Pharmaceutical Science, National Research Council of Thailand, 2009
 4. Innovation Ambassador: Bio-based Materials/ National Innovation Agency, 2009.
 5. Thailand Innovation Awards/ PTT Chem. and Ministry of Science and Technology, 2007.
 6. Innovation Ambassador/ National Innovation Agency, 2006.
 7. Micrograph Award (3rd prize), Microscopy Society of Thailand, 2006.
 8. Hitachi Fellowship Scholar from Hitachi Scholarship Foundation, 1995-Present.
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Research Activities:

A) Publications (lastet 5 years): (*: Corresponding Author)

1. Jarumaneeroj, C., Tashiro, K., Chirachanchai, S., "Shifting from Hydrogen Bond Network to $\pi - \pi$ Stacking: A Key Mechanism for Reversible Thermochromic Sulfonated Poly

- (Ether Ether Ketone)”, *Macromolecular Rapid Communications*, *in press*, 2014. (Impact Factor 2013 : 4.608)
2. Jirawutthiwongchai, J.; Draeger, G.; Chirachanchai, S., “Rapid Hybridization of Chitosan-Gold-Antibody via Metal-free Click in Water based System: a Model Approach for Naked-eye Detectable Antigen Sensor”, *Macromolecular Rapid Communications*, *in press*, 2014. (Impact Factor 2013 : 4.608)
 3. Jariyasakoolroj, P.; Chirachanchai, S., “Silane Modified Starch for Compatible Reactive Blend with Poly(lactic acid)”, *Carbohydrate Polymers*, 106, 255-263, 2014. (Impact Factor 2013 : 3.916)
 4. Rungswang, W.; Kotaki, M.; Shimojima, T.; Kimura, G.; Sakurai, S.; Chirachanchai, S., “Role of surfactant on inducing specific microdomains of block copolymer: An example case from polystyrene-*b*-poly(ethylene-co-1-butene)-*b*-polystyrene (SEBS) electrospun thermoplastic-elastomer fiber containing polyethylene glycol lauryl ether (PGLE)”, *Polymer*, 55, 8, 2068-2076, 2014 (Impact Factor 2013: 3.766)
 5. Patomporn Chantarasataporna, Preenapha Tepkasikuld, Yuthana Kingchad, Rangrong Yoksane, Rath Pichyangkuraf, Wonnop Visessanguand, Suwabun Chirachanchai, “Water-based Oligochitosan and Nanowhisker Chitosan as Potential Food Preservatives for Shelf-life Extension of Minced Pork”, *Food Chemistry*, 159, 463-470, 2014 (Impact factor 2013 : 3.259)

6. Suchao-in, K.; Koombhongse, P.; Chirachanchai, S.* "Starch Grafted Poly(butylene succinate) via Conjugating Reaction and its Role on Enhancing the Compatibility", Carbohydrate Polymer, 102, 95-102, 2014 (Impact Factor 2013 : 3.916)
7. Jarumaneeroj, C.; Tashiro, K.; Chirachanchai S.* "Molecular Mobility of Imidazoles in Molten State as a Key Factor to Enhance Proton Conductivity", Journal of power source, 249, 185-192, 2014 (Impact Factor 2012 : 5.211)
8. Phuphuak, Y.; Miao Y.;Zinck, P.; Chirachanchai S.* "Balancing Crystalline and Amorphous Domains in PLA through Star-structured Polylactide with Dual Plasticizer Nucleating Agent Functionality", Polymer, 54, 16, 7058-7070, 2013 (Impact Factor 2012 : 3.379)
9. Suchao-in, K. and S. Chirachanchai "'Grafting to" as a Novel and Simple Approach for Triple-Shape Memory Polymers", ACS Applied Materials & Interfaces, 5, 15, 6850-6853, 2013 (Impact Factor 2012 : 5.008)
10. Chatrabhuti, S. and S. Chirachanchai "Chitosan Core-corona Nanospheres: A Convenient Material to Tailor pH and Solvent Responsive Magnetic Nanoparticles." Polymer, 54, 16, 4318-4324, 2013 (Impact Factor 2012 : 3.438)
11. Chatrabhuti, S.; Chirachanchai, S.* "Single Step Coupling for Multi-responsive Water-based Chitin/Chitosan Magnetic Nanoparticles", Carbohydrate Polymers, 97, 2, 441-450, 2013. (Impact factor 2012 : 3.628)
12. Jirawutthiwongchai, J.; Krause, A.; Draeger, G.; Chirachanchai, S.* "Chitosan-Oxanorbornadiene: A Convenient Chitosan Derivative for Click Chemistry without

Metal Catalyst Problem", ACS Macro Letters, 2, 177–180, 2013. (Impact Factor 2012 : None)

13. Chantarasataporn, P.; Yoksan, R.; Visessanguan, W.; Chirachanchai, S.* "Water-based Nano-sized Chitin and Chitosan as Seafood Additive through a Case Study of Pacific White Shrimp (*Litopenaeus vannamei*)", Food Hydrocolloids, 32, 2, 341-348, 2013. (Impact Factor 2012 : 3.460)
14. Phuphuak, Y.; Chirachanchai, S.* "Simple Preparation of Multi-Branched Poly(L-lactic Acid) and Its Role as Nucleating Agent for Poly(lactic Acid)", Polymer, 54, 572–582, 2012. (Impact Factor 2012 : 3.438)
15. Pangon, A.; Chirachanchai, S.* "Poly(acrylic acid) containing multi-benzimidazole units: A simple approach to obtain polymer with proton donor-acceptor system", Polymer, 53, 3878-3884, 2012. (Impact Factor 2011 : 3.573)
16. Rungswang, W.; Kato, K.; Kotaki, M.; Chirachanchai, S.* "Size-controllable nanospheres prepared by blending a thermoset monomer in confined morphology with thermoplastic elastomer", Polymer, 53, 1167-1171, 2012. (Impact Factor 2011 : 3.573)
17. Rungswang, W.; Chirachanchai, S.*; Kotaki, M.; Sakurai, S.; Kimura, G.; Shimojima, T. "Directing Thermoplastic Elastomer Microdomain Parallel to Fiber Axis: A Model Case of SEBS with Benzoxazine through π - π Stacking", Macromolecules, 44, 9276–9285, 2011. (Impact Factor : 4.837)
18. Pangon, A., Tashiro, K., Chirachanchai, S. * "Polyethylenimine Containing Benzimidazole Branching: A Model System Providing a Balance of Hydrogen Bond

- Network or Chain Mobility Enhances Proton Conductivity”, *Journal of Physical Chemistry Part B*, 115, 11359–1367, 2011. (Impact Factor : 3.603)
19. Pangon, A., Totsatitpaisan, P., Eiamlamai, P., Hasegawa, K., Yamasaki, M., Tashiro, K., Chirachanchai, S.* “Systematic studies on benzimidazole derivatives: Molecular structures and their hydrogen bond networks formation toward proton transfer efficiency”, *Journal of Power Sources*, 196, 6144–6152, 2011. (Impact Factor : 3.792)
 20. Jithunsa, M., Tashiro, K., Nunes, S. P., Chirachanchai, S.* “Poly(acrylic acid-co-4-vinylimidazole)/ Sulfonated poly(ether ether ketone) blend membranes: A role of polymer chain with proton acceptor and donor for enhancing proton transfer in anhydrous system” *International of Journal of Hydrogen Energy*, 36, 10384-10391, 2011. (Impact Factor 2010 : 3.945)
 21. Rungswang, W., Kotaki, M., Shimojima, T., Kimura, G., Sakurai, S., Chirachanchai, S.*, “Existence of microdomain orientation in thermoplastic elastomer through a case study of SEBS electrospun fibers” *Polymer*, 52, 844-853, 2011. (Impact Factor : 3.573)
 22. Rungswang, W. , Chirachanchai, S.*, “Formation of Thermosets via Molecular Pockets in Thermoplastic Chains: A Simple and Direct Way to Nanospherical Thermosets” *Macromolecular materials and Engineering*, 296, 428-433, 2010 (Impact factor : 1.742)
 23. Yoksan, R. *, Chirachanchai, S., “Silver nanoparticle-loaded chitosan-starch based film: Fabrication and evaluation of tensile, barrier and antimicrobial properties” *Material Science and Engineering C*, 30, 891-897, 2010. (Impact Factor 2008: 1.842)

B) Books

1. Chirachanchai, S.; Pangon, A.; Jarumaneeroj, C. “High Temperature Performance PolymerElectrolyte Membranes” In “Membrane ProcessesFor Sustainable Growth” ; Basile, A.; Cassano, A.; Nova Publisher, London, UK, 2013; pp. 247-288
2. Chirachanchai S.; Phongtamrug S.; and Tashiro K. “Supramolecular Chemistry of Benzoxazines: From Simple, Selective, Effective, and Efficient Macrocyclization Pathways to Host-Guest Properties” In Handbook of Benzoxazine Resins; Ishida, H.; Agag, T.; Eds.; Elsevier’s Science & Technology: Oxford, London, UK, 2011; pp 332-355.
3. Chirachanchai S.; Phongtamrug S.; Laobuthee A.; and Tashiro K. “Mono-Substituted Phenol-Based Benzoxazines: Inevitable Dimerization via Self-Termination and Its Metal Complexation” In Handbook of Benzoxazine Resins; Ishida, H.; Agag, T.; Eds.; Elsevier’s Science & Technology: Oxford, London, UK, 2011; pp 112-127.

C) Patents:

1. Chirachanchai, S.; บริษัท อุตสาหกรรมถุงพลาสติกไทย จำกัด (Thai Plastic Bags Industries Co.,Ltd) ; บริษัท วัลย์ดีพาณิชย์อุตสาหกรรม จำกัด (Wandee Panich Industry Co.,Ltd.) “แป้งปรับสภาพผิวเพื่อการผสมเนื้อเดียวกับพอลิเอสเตอร์แตกสลายได้ (Surface modified starch for homogeneous blend with polyester biodegradable plastics)”, สถาบันทรัพย์สินทางปัญญาแห่งจุฬาลงกรณ์มหาวิทยาลัย, Patent pending.
2. Ichikawa, N.; Chirachanchai, S. (2007) “Chitosan Derivative and Polymer Coagulant”, Japanese Patent (JP2007119533).

3. Phongying, S.; Lertwattanaseri, T.; Chirachanchai, S.* (2006) “Chitosan Nanoscaffold”, Thai Patent Application, patent pending.
 4. Chirachanchai, S.; Fungkangwanwong, J. (2006), “Chitosan Superabsorbent Gel”, Thai Patent Application, patent pending.
 5. Fungkangwanwong, J.; Yoksan, R.; Chirachanchai, S. (2006), “Preparation of Chitosan Aqueous Solution”, Thai Patent Application, patent pending.
 6. Pasanphan, W.; Chirachanchai, S. (2006), “Material for the Breeding Prevention of Apple Snails”. Thai Patent Application, patent pending.
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