Curriculum Vitae

NARA INSTITUTE OF SCIENCE AND TECHNOLOGY - Outgrow your limits - NAIST

Personal Details

Update 2025/10/25

Surname: **CHANTHASET**

First Name: **Nalinthip (Dr.)**

Current Position : **Assistant Professor** (From April 2019 - Present)

Terminal Degree : **Ph.D. (Doctor of Engineering)**

Nationality : **Thailand**

Date of birth : **August 4, 1990**

Email : **nalin@ms.naist.jp**

Current Address : NAIST, Graduate School of Science and Technology
Division of Materials Science
Nanomaterials and Polymer Chemistry Lab.
8916-5 Takayama-cho, Ikoma-shi, Nara, Japan 630-0192

Phone : +81(0)743-72-5507

Core Focus

- Expertise in ***organic synthesis***, *molecular designing* and ***polymer functionalization***
- Specialized in ***biodegradable materials*** with ***cutting-edge*** functionalities for ***medical*** & ***environmental*** utilizations and development of *know-how technology*
- Technical expertise in the ***novel*** design of poly(trimethylene carbonate) ***PTMC***, functional poly(butylene succinate) ***PBS***, and poly(lactide) ***PLA*** derivatives
- ***Strong practical teaching ability*** and expertise in polymer science, ***critical thinking***, ***multilingual communication***, and technical design
- ***Strong soft skills***, with excellent interpersonal abilities in ***leadership, problem-solving***, ***teamwork***, and ***well management***
- Experienced in ***collaborating*** with ***global hub*** such as Asian & European

Education

Doctoral Engineering, Ph.D.

1. Year (Period) : September 2018 (Oct. 2015-Sep.2018)

   University, Department : NAIST, Nara, Japan
   Graduate School of Materials Science
   (Nanomaterials and Polymer Chemistry lab.)

   Research title : Preparation of Poly(trimethylene carbonate) Derivatives with Oligo(ethylene glycol) and Their Thermosensitive and Degradable Properties

   Supervisor : Prof. Hiroharu AJIRO

Education (con.)

Master of Science, M.S. (Nanomaterials Science)

2. Year (Period) : July 2015 (Aug. 2013- Jul.2015)
   University, Department : Kasetsart University (KU), Bangkok, Thailand
   Department of Materials Science (CGC lab.)
   Research title : Synthesis and Characterization: A Novel Comb-shaped Polycarboxylate with Benzaldehyde Derivative for Antimicrobial Superplasticizer
   Supervisor : Assoc. Prof. Chantiga Choochottiros

Bachelor of Science, B.S. (Chemistry)

3. Year (Period) : May 2013 (Jun. 2009- May. 2013)
   University, Department : Kasetsart University (KU), Bangkok, Thailand
   Department of Chemistry (Analytical laboratory)
   Research title : Alkaline Polymer Electrolyte
   Supervisor : Asst. Prof. Atchana Wongchaisuwat

Experiences

Dec.2022~Dec.2023	Collaborative project of Fundamental Fund (FF) with Botany department (Development of Kaolinite clay by polymeric adjuvants) Kasetsart University in Thailand 2023	Co-researcher
Apr.2022~Mar.2023	Collaborative project of Joint Research with Nara Medical University (Public University Corporation), Development of microparticles IVR NAIST, Japan	Project member
Jan.2019~Mar.2019	Work at SCG Chemical, Thai polyethylene co., ltd. Rayong, Thailand	Project R&D
Jan.2018~Mar.2018	Exchange research project at Institute of Inorganic chemistry, RWTH Aachen University (Aachen, Germany) Overseas Practical Training 2018	Lab-stay
Jan.2016~Feb.2016	Participated English for Scientific Seminar at UC Davis extension (University of California Davis, USA) NAIST Materials and Biological Sciences Program	Trainee
Nov.2014~Jan. 2015	Exchange research at Department of Applied Chemistry, Graduate School of Engineering, Osaka University (Osaka, Japan) Bilateral Research Cooperation (BRC2014)	Lab-stay
Nov.2014~Nov. 2015	Collaborated project, KU-Siam Research and Innovation Co., Ltd. (Mortar and Concrete Research, Saraburi) Research and Researcher for Industry grant (RRI-MAG2014)	Collaborated student

Grants and award budgets

Mar. 2025 - Feb. 2027	Shorai Foundation for Science and Technology Promotion (Public Interest Incorporated Foundation)	*2,000,000 yen*
Feb. 2025 - Mar. 2026	NAIST Senju Monju Project, Research support for young researchers Phase1	*200,000 yen*
Apr. 2024 - Mar. 2025	Joint Research Grant Program with Nara Medical University	*1,000,000 yen*
Apr. 2023 - Mar. 2024	Masuya Memorial Foundation for the Promotion of Fundamental Research (2023011)	*500,000 yen*
Apr. 2023 - Mar. 2024	Iketani Science and Technology Promotion Foundation (0351163-A)	*1,500,000 yen*
Oct. 2022 - Sep. 2024	Izumi Science and Technology Promotion Foundation (2022-J-081)	*1,000,000 yen*
Apr. 2021 - Mar. 2022	Global Collaborative Program 2021 (Collaborative research activity)	*750,000 yen*
Apr. 2020 - Mar. 2021	Global Collaborative Program 2020 (Collaborative research activity)	*1,200,000 yen*
Jun. 2019 – Mar. 2022	Woman Teacher Incentive fund	*1,800,000 yen*
Jun. 2019 - Mar. 2022	Foreign Teacher Incentive fund	*1,800,000 yen*
Jun. 2019 - Mar. 2021	Woman Teacher start-up fund	*2,000,000 yen*
Jun. 2019 - May. 2021	Foreign Teacher start-up fund	*2,000,000 yen*

Awards and patents

Oct.2015-Sep.2018	Japanese Monbukagakusho Scholarship, MEXT (Ministry of Education, Culture, Sports, Science and Technology)	Ph.D. course
Jul. 2015	Honor for outstanding graduate (The Graduate School, Kasetsart University)	Post-graduate
Aug.2013-Jul.2015	Postgraduate Studentship (ScKUPGS) (Faculty of Science, Kasetsart University)	Post-graduate
May2010-Apr.2011	Science Achievement Scholarship of Thailand (SAST)	Undergraduate

- Japanese Patent No. 7694952 [2025/6/10], Application no. 2021-187319 [2021/11/17]
  Title: **Polybutylene Succinate Copolymers**
  Inventors Name: Hiroharu Ajiro, ***Nalinthip Chanthaset***, Utana Narukawa
- Japanese Patent No. 7678448 [2025/05/08], Application no. 2021-082645 [2021/05/14]
  Title: **Trimethylene Carbonate Derivatives and Polymers**
  Inventors Name: Hiroharu Ajiro, ***Nalinthip Chanthaset***, Takamasa Matsumoto
- Japanese Patent Application No. 2022-001250 [2022/01/06]
  Title: **Coating Material for Intracanal Implantable Medical Devices**
  Inventors Name: Hiroharu Ajiro, ***Nalinthip Chanthaset***, Hiroaki Yoshida, Lee Yae Tan, Maho Oura

Invited lecture

1. ***Nalinthip Chanthaset**** **[Invited]**, " My Life in Japan: A Journey through Academic Growth & Polymer Science",
   The 15th Chemistry Festa (CSJ Festa), the International Relations session C3-02, Tower Hall Funabori, Tokyo (Japan), October 22-24, 2025. 【Oral】
2. ***Nalinthip Chanthaset**** **[Invited]**, "Advances in Self-Assembling Biodegradable Polymers: Polylactide, Poly(trimethylene carbonate), and Poly(butylene succinate)",
   Public Seminar, Institut Parisien de Chimie Moléculaire Sorbonne Université (Polymer Chemistry team), Campus Pierre & Marie Curie 4 Place Jussieu 75005 Paris, FRANCE, October 20, 2025.【Oral】
3. ***Nalinthip Chanthaset**** **[Invited]**, "Exploring the Challenges and Opportunities in Functional Ester-free PTMC PLA and polyester derivatives",
   The 14th International Polymer Conference of Thailand (PCT-14), BMED-IV1, Amari Watergate Hotel, Bangkok (Thailand), July 18-19, 2024. 【Oral】

Reviews

1) **Nalinthip Chanthaset**, Hiroharu Ajiro*,
   "Synthetic Biodegradable Polymers with Chain End Modification: Polylactide, Poly(butylene succinate), and Poly(hydroxyalkanoate)"
   <Highlight Review, Special edition at 50th Anniversary>,
   Chem. Lett. **2021**, *50(4)*, 767-777. (IF1.6/ Cited 12)
2) Hiroharu Ajiro*, Yoshiaki Haramiishi, **Nalinthip Chanthaset**, Mitsuru Akashi*,
   "Polymer Design Using Trimethylene Carbonate with Ethylene Glycol Units for Biomedical Application"
   Polym. J. [Focus Review], **2016**, *48*, 751-760. (IF2.3/ Cited 10)

Publications

1. **Nalinthip Chanthaset***, Utana Narukawa, Hiroharu Ajiro*,
   " A Sulfobetaine-Modified Poly(butylene succinate) with Fine-Tuned Mechanical and Lubricating Properties in Melted Film Discs"
   ACS Applied Materials & Interfaces (IF8.2)
   Submitted: 1 August 2025, Revision submitted: 25 October 2025
2. Maho Oura, Amane Kamei, Chantiga Choochottiros, **Nalinthip Chanthaset**, Hiroharu Ajiro*,
   "Water flux evaluation by using semipermeable membrane and various poly(N-isopropyl acrylamide) hydrogels with semi- interpenetrating polymer network",
   J. Appl. Polym. Sci. accepted on 13th August **2025**. (IF2.8)
   DOI: https://doi.org/10.1002/app.57873
3. Kamolchanok Sarisuta, Blanca Martín-Vaca* Didier Bourissou,* Julien Monot, **Nalinthip Chanthaset,*** Hiroharu Ajiro*,
   "Thiol-ene derivatization of polycarbonates deriving from 5-methylene-1,3-dioxane-2-one: an efficient and practical way to tune the surface biocompatibility of polycarbonate films",
   Polym. J. <Special issue> Accepted on 27th May 2025.

Publications *(con.)*

4. Ayun Erwina Arifianti, Takamasa Matsumoto, **Nalinthip Chanthaset,*** Hiroharu Ajiro*,
"Synthesis and Characterization of Ester-Free Type Poly(trimethylene carbonate) Bearing Long-Alkyl Moieties and Its Degradation",
Polym. J. **2025**, 57, 279-290. (IF2.3)

5. Shuga Katayama, Maho Oura, Clement Matthew Chan, Peter Halley, Shosuke Yoshida, **Nalinthip Chanthaset**, Hiroharu Ajiro*
"Antioxidation and rheological modification of polylactide by gallic acid at chain end and stereocomplex formation",
Chem. Lett. **2024**, 53(11), 1-4. (IF1.4)

6. Rui Zhang, **Nalinthip Chanthaset*,** Takeshi Sato, Shinichi Iwakoshi, Katsutoshi Horiuchi, Toshihiro Tanaka,* Hiroharu Ajiro*,
"Particle behaviors of Imipenem/Cilastatin in various liquids investigated by chemical structures and temporal microscope observations",
Colloid Surf. A. : Physicochem. Eng. Asp. **2024**, 701, 134896. (IF4.9)
7. Desy Liana, Hiroharu Ajiro, **Nalinthip Chanthaset*,** Anuchit Phanumartwiwath*
"A Smart Dual pH- and Thermo-Responsive PNIPAM-BIS Hydrogel Incorporated with PLLA Microparticles for Enhanced Topical Delivery of Betamethasone Dipropionate Supplemented with Boesenbergia rotunda for Atopic Dermatitis Treatment",
ACS Appl. Polym. Mater. **2024**, 6, 15, 9294–9305. (IF4.5/ Cited 1)
8. Arunthip Suesuwan, Natapol Suetrong, Sila Yaemphutchong, Inthikan Tiewlamsam, Kantapat Chansaenpak,Suttipong Wannapaiboon, Nutthawat Chuanopparat, Ladda Srathongsian, Pongsakorn Kanjanaboos, **Nalinthip Chanthaset**, Worawat Wattanathana*
"Partially bio-based benzoxazine monomers derived from thymol: Photoluminescent properties, polymerization characteristics, hydrophobic coating investigations and anticorrosion studies",
Polymers, **2024**, 16(13), 1767. (IF5.0/ Cited 4)

9. **Nalinthip Chanthaset*,** Nichagarn Greetatorn, Oratai Jongprateep, Hiroharu Ajiro*, Kanapol Jutamanee*
"Sustainable Coating Materials: Exploring the Influence of Adjuvants on Kaolinite Suspension with Insights from Five Local Mining Clays",
ACS Omega **2024**, 9(18), 20231-20242. (IF4.1)

10. **Nalinthip Chanthaset***, Akari Maehara, Hiroharu Ajiro*,
"Particles and film preparation of ester-free type poly(trimethylene carbonate) derivatives bearing aromatic groups initiated with hydrophilic initiators",
Colloids Surf. A. **2023**, *667(20),* 131413(8). (IF4.9)

11. Lee Yae Tan, **Nalinthip Chanthaset***, Arif Fadlan, Hiroharu Ajiro*,
"Synthesis of Ester-free Poly(trimethylene carbonate) Bearing Cinnamyl Moiety for Antibacterial Biomaterials Applications",
React. Funct. Polym., **2023**, *186*, 105563(8). (IF4.1)

12. Kamolchanok Sarisuta, Mizuho Iwami, Blanca Martín-Vaca, **Nalinthip Chanthaset***, Hiroharu Ajiro*
"pH effect on particle aggregation of vanillin end-capped polylactides bearing a hydrophilic group connected by a cyclic acetal moiety"
Langmuir, **2023**, *39(11)*, 3994-4004. (IF3.7)

Publications *(con.)*

13. Miguel Palenzuela, KamolchanokSarisuta, Marta Navarro, Narumi Kumamoto, **Nalinthip Chanthaset**, Julien Monot, Hiroharu Ajiro, Blanca MARTIN-VACA,* Didier Bourissou* "5-Methylene-1,3-Dioxane-2-One: A First Choice Comonomer for Trimethylene Carbonate", *Macromolecules*, **2023**, *56(2)*, 678-689. (IF5.1)

14. Lee Yae Tan, **Nalinthip Chanthaset***, Hiroharu Ajiro*, "Surface Coating and Characteristics of Ester-free Poly(trimethylene carbonate) Bearing an Aromatic Urea Moiety for Biomaterials Use", *Mater. Adv.* **2022**, *3*, 5778-5785. (IF5.2)

15. Rikyu Miyake, Akari Maehara, **Nalinthip Chanthaset**, Hiroharu Ajiro*, "Thermal property control by copolymerization of trimethylene carbonate and its derivative bearing triphenylmethyl group", *Chemistry Select* **2022**, 7, e202104326. (IF1.9)

16. Shin Asano, Jaeyeong Choi, Tran Thi Tran, **Nalinthip Chanthaset**, Hiroharu Ajiro*, "The influence of chain-end functionalization and sterecomplexation on the degradation stability under alkaline condition" *Polym. Adv. Technol.* **2022***, 33(3)*, 991-999. (IF3.9)
17. Hiroaki Nobuoka, Rikyu Miyake, Jaeyeong Choi, Hiroaki Yoshida, **Nalinthip Chanthaset**, Hiroharu Ajiro* "Synthesis of ester free type poly(trimethylene carbonate) derivatives bearing cycloalkyl side groups" *Eur. Polym. J.* **2021**, *160*, 110782. (IF5.8)
18. Lee Yae Tan, **Nalinthip Chanthaset***, Shinsuke Nanto, Ryoichi Soba, Masakazu Nagasawa, Hiroshi Ohno, and Hiroharu Ajiro* "Synthesis and Preparation of Cross-linked Films with Ester-Free Poly(trimethylene carbonate) Bearing Aromatic Urea Moiety" *Macromolecules* **2021**, 54, 12, 5518-5525. (IF5.1)

19. Koichi Irikura, Natjaya Ekapakul, Chantiga Choochottiros, **Nalinthip Chanthaset**, Hiroaki Yoshida, Hiroharu Ajiro* "Fabrication of flexible blend films using chitosan derivative and poly(trimethylene carbonate)" *Polym. J.* **2021**, *53(7)*, 823-833. (IF2.3)

20. Steffen Seitz, Masaya Tsujimoto, **Nalinthip Chanthaset**, Hiroaki Yoshida, Hiroharu Ajiro "Novel approach to recover copper ions using poly (ethylene imine) based layer-by-layer coatings on icosane particles" *J. Appl. Polym. Sci.* **2021**, *138*, 50202. (IF2.7)

21. Narumi Kumamoto, **Nalinthip Chanthaset**, Hiroharu Ajiro*, "Polylactide stereocomplex bearing vinyl groups at chain ends prepared by allyl alcohol, malic acid, and citric acid", *Polym. Degrad. Stab.* **2020**, 180, 109311(1-7). (IF6.4)

Publications *(con.)*

23. Hiroaki Nobuoka, Masakazu Nagasawa, **Nalinthip Chanthaset**, Hiroaki Yoshida, Yoshiaki Haramiishi, Hiroharu Ajiro*,
"Synthesis of amphiphilic block copolymer using trimethylene carbonate bearing oligo(ethylene glycol) and investigation of thin film including cilostazol",
J. Polym. Sci. Part A., Polym. Chem. **2020**, 58, 2347-2354. (IF2.8)

24. Yoshiaki Haramiishi, Ryo Kawatani, **Nalinthip Chanthaset**, Hiroharu Ajiro*,
"Preparation of Block Copolymer of Poly(trimethylene carbonate) with Oligo(ethylene glycol) and the Surface Properties of the Dip Coated Film",
Polym. Test. **2020**, 86, 106484. (IF4.7)

25. **Nalinthip Chanthaset**, Klaus Beckerle, Jun Okuda, Hiroharu Ajiro*,
"Investigation of Ring Opening Polymerization of 5-[2-{2-(2-methoxyethoxy)ethyoxy}-ethoxymethyl]-5-methyl-1,3-dioxa-2-one by Organometallic Catalysts",
J. Appl. Polym. Sci. **2020**, 137(36), 49073(1-12). (IF2.7)

26. Yoshiaki Haramiishi, Ryo Kawatani, **Nalinthip Chanthaset**, Hiroharu Ajiro*,
"Viscoelastic Evaluation of Poly(trimethylene carbonate)s Bearing Oligoethylene glycol Units Which Shows Thermoresponsive Properties at Body Temperature"
Macromol. Chem. Phys. **2019**, 220, 1900019(1-6). (IF2.5)

27. **Nalinthip Chanthaset**, Hiroharu Ajiro*
"Preparation of thermosensitive biodegradable hydrogel using poly(5-[2-{2-(2-methoxyethoxy)ethyoxy}-ethoxymethyl]-5-methyl-1,3-dioxa-2-one) derivatives"
Materialia, **2019**, 5, 100178. (IF3.3)

28. **Nalinthip Chanthaset**, Hiroharu Ajiro, Mitsuru Akashi, and Chantiga Choochottiros*
"A novel comb-shaped polymethacrylate-based copolymers with immobilized 2,4-dihydroxybenzaldehyde for antifungal activity"
Polym. Bull. **2018**, 75(4), 1349-1363. (IF3.6)

29. **Nalinthip Chanthaset**, Yoshikazu Takahashi, Yoshiaki Haramiishi, Mitsuru Akashi, Hiroharu Ajiro*
"Control of Thermoresponsivity of Biocompatible Poly(trimethylene carbonate) with Direct Introduction of Oligo(ethylene glycol) under Various Circumstances"
J. Polym. Sci. Part A: Polym. Chem. **2017**, 55(20), 3466-3474. (IF2.9)

30. Yoshiaki Haramiishi, **Nalinthip Chanthaset**, Kai Kan, Mitsuru Akashi, Hiroharu Ajiro*
"Contrast effect on hydrolysis of poly(trimethylene carbonate) depending on accelerated species due to the hydrophilic oligo(ethylene glycol) units at side groups"
Polym. Degrad. Stab. **2016**, *130*, 78-82. (IF6.4)