

Personal Details

Update 2025/4/10

Surname

CHANTHASET

First Name

Nalinthip (Dr.)

Current Position

: **Assistant Professor**

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, JP 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

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)
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)
Department of Chemistry (Analytical laboratory)
- Research title : Alkaline Polymer Electrolyte
- Supervisor : Asst. Prof. Atchana Wongchaisuwat

Experiences

Oct.2025 (3 weeks)	Researcher exchange: French Embassy SSHN program, collaboration 🇫🇷 SOFTMAT Laboratory of Université de Toulouse	Visiting professor
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

Mar. 2025 - Feb. 2027	Shorai Foundation for Science and Technology Promotion (Public Interest Incorporated Foundation)	Award grant
Feb. 2025 - Mar. 2026	NAIST Senju Monju Project, Research support for young researchers Phase1	Award Budget
Apr. 2024 - Mar. 2025	Joint Research Grant Program with Nara Medical U FY2024	Award Budget
Apr. 2023 - Mar. 2024	Masuya Memorial Foundation for the Promotion of Fundamental Research (2023011)	Award grant
Apr. 2023 - Mar. 2024	Iketani Science and Technology Promotion Foundation (0351163-A)	Award grant
Oct. 2022 - Sep. 2024	Izumi Science and Technology Promotion Foundation (2022-J-081)	Award grant
Apr. 2021 - Mar. 2022	Global Collaborative Program 2021 (Collaborative research activity)	Award Budget
Apr. 2020 - Mar. 2021	Global Collaborative Program 2020 (Collaborative research activity)	Award Budget
Jun. 2019 – Mar. 2022	Woman Teacher Incentive fund	Award Budget
Jun. 2019 - Mar. 2022	Foreign Teacher Incentive fund	Award Budget
Jun. 2019 - Mar. 2021	Woman Teacher start-up fund	Award Budget
Jun. 2019 - May. 2021	Foreign Teacher start-up fund	Award Budget

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 student
Aug.2013-Jul.2015	Postgraduate Studentship (SckUPGS) (Faculty of Science, Kasetsart University)	Post-graduate student
May2010-Apr.2011	Science Achievement Scholarship of Thailand (SAST)	Undergraduate student

- 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
- Japanese Patent Application No. 2021-082645 [2021/05/14]
Title: Trimethylene Carbonate Derivatives and Polymers
Inventors Name: Hiroharu Ajiro, Nalinthip Chanthaset, Takamasa Matsumoto
- Japanese Application No. 2021-187319 [2021/06/29]
Title: Polybutylene Succinate Copolymers
Inventors Name: Hiroharu Ajiro, Nalinthip Chanthaset, Utana Narukawa

Invited lecture

1. **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. (IF1.4/TC9)
- 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/TC9)

Publications

1. 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. accepted on October 14th, **2024**. (IF2.3/TC0)
2. 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. accepted on 29th September **2024**. (IF1.4/TC0)
3. 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. (IF4.7/TC0)
4. 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. (IF4.4/TC0)
5. 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/TC0)

Publications (con.)

6. **Nalinthip Chanthaset***, Nichagarn Greetatorn, Oratai Jongprateep, Hiroharu Ajiro*, Kanapol Jutamane*, “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. (IF4.0/TC0)
7. **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/TC0)
8. 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). (IF4.8/TC0)
9. Kamolchanok Sarisuta, Mizuho Iwami, **Nalinthip Chanthaset*** and Hiroharu Ajiro* “Physiological Aggregation of Cyclic Acetal End-capping Poly(L-lactic acid) Bearing Vanillin Derivatives” *Langmuir*, **2023**, 39, 3994-4004. (IF3.8/TC0)
10. Miguel Palenzuela, Kamolchanok Sarisuta, 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. (IF5.5/TC2)
11. 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/TC0)
12. 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/TC6)
13. Shin Asano, Jaeyeong Choi, Tran Thi Tran, **Nalinthip Chanthaset**, Hiroharu Ajiro*, “The influence of chain-end functionalization and stereocomplexation on the degradation stability under alkaline condition” *Polym. Adv. Technol.* **2022**, 33(3), 991-999. (IF3.1/TC3)
14. 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/TC5)

Publications (con.)

15. 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. (IF5.5/TC7)
16. 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/TC9)
17. 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. (IF3.0/TC6)
18. 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). (IF6.3/TC8)
19. 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. (IF3.4/TC1)
20. 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. (IF5.0/TC0)
21. **Nalinthip Chanthaset**, Klaus Beckerle, Jun Okuda, Hiroharu Ajiro*,
“Investigation of Ring Opening Polymerization of 5-[2-{2-(2-methoxyethoxy)ethoxy}-ethoxymethyl]-5-methyl-1,3-dioxo-2-one by Organometallic Catalysts”,
J. Appl. Polym. Sci. **2020**, 137(36), 49073(1-12). (IF3.0/TC1)
22. 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/TC4)
23. **Nalinthip Chanthaset**, Hiroharu Ajiro*
“Preparation of Thermosensitive Biodegradable Hydrogel Using Poly(5-[2-{2-(2-methoxyethoxy)ethoxy}-ethoxymethyl]-5-methyl-1,3-dioxo-2-one)Derivatives”
Materialia, **2019**, 5, 100178. (IF3.3/TC13)

Publications (con.)

24. **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. (IF3.1/TC3)
25. **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/TC14)