

## Personal Details (個人情報)

Name (氏名)	Surname	First Name	Last Updated (更新日)
	: AJIRO (網代)	Hiroharu (広治)	April 1 <sup>st</sup> , 2026
Nationality (国籍)	: Japan (日本国)		
Gender (性別)	: Male (男性)		
Date of birth (生年月日)	: June 9 <sup>th</sup> 1975		
Age (年齢)	: 50		
Mailing address (住所)	: Takayama-cho 8916-5, Ikoma, Nara 630-0192, Japan (〒630-0192 奈良県生駒市高山町 8916-5)		
Tel. (電話) / Email (メール)	: +81-(0)743-72-5508 / ajiro@ms.naist.jp		
Current position (現職)	: Professor (教授),		



Medilux Research Center, Nara Institute of Science and Technology (NAIST)  
(奈良先端科学技術大学院大学 先端科学技術研究科 メディルクス研究センター)

## Concurrent (学内兼任) after 2019

- 2020.4~present : Data Science Center (データ駆動型サイエンス創造センター)
- 2022.4~2024.3. : NAIST-ARIM, Member (マテリアル先端リサーチインフラ事業 委員)
- 2023.4~2024.3. : Center for Materials Research Platform (マテリアル研究プラットフォームセンター)
- 2023.4~2025.3. : Office of Cooperation and Activation, Nara Medical University, member (奈良県立医科大学連携活性推進室 委員)
- 2024.7~present : Graduate School of Science and Technology, Division of Materials Science (先端科学技術研究科 物質創成科学領域)
- 2024.7~2026.3. : Medilux Research Center, Nara Institute of Science and Technology (NAIST)  
(奈良先端科学技術大学院大学 先端科学技術研究科 メディルクス研究センター)  
Director of Research and Promotion (研究推進部門長)
- 2025.4~2026.3. Assistant to the President (International Affairs) (学長補佐 (国際))
- 2025.10~2026.3. Director, International Collaboration Division, Organization for International and Human Resource Development Promotion (国際連携・人材開発推進機構国際連携部門長)

## Other Certifications (その他の資格等)

- EIKEN Grade Pre-1 (英検準1級)
- Licensed Mental Care Counselor (メンタルケア心理士®)
- Utilized for international research collaboration, student supervision, and academic presentations. (国際共同研究・留学生指導・学会発表に活用)。
- Applied to support mental health of lab members and foster a collaborative research environment. (学生のメンタル支援・研究促進に活用)。

## Educational Background (学歴)

## 1. Postgraduate education (大学院博士課程)

Year (年月日)	: March 25 <sup>th</sup> , 2004 (平成 16 年 3 月 25 日)
University, Department (大学院、専攻)	: Graduate School of Engineering, Nagoya University (名古屋大学大学院 工学研究科 応用化学専攻)
Research title (研究題目)	: Synthesis and Stereochemistry of Novel Polystyrene Derivatives with Controlled Structure (構造制御された新規ポリスチレン誘導体の合成と立体化学)
Supervisor (指導教官)	Prof. Yoshio Okamoto (岡本佳男 教授)
Doctor's degree (学位)	: Doctor of Engineering, Ph.D. 博士 (工学)

## 2. Postgraduate education (大学院修士課程)

Year (年月日)	: March 26 <sup>th</sup> , 2001 (平成 13 年 3 月 26 日)
University, Department (大学院、専攻)	: Graduate School of Engineering, Nagoya University (名古屋大学大学院 工学研究科 応用化学専攻)
Research title (研究題目)	: Stereo control of polystyrene derivatives bearing aminomethyl groups at ortho position by anionic polymerization (オルト置換アミノメチルスチレン誘導体のアニオン重合における立体構造制御)
Supervisor (指導教官)	Prof. Yoshio Okamoto (岡本佳男 教授)
Master's degree	: Master of Engineering 修士(工学)

## 3. Undergraduate education (学部)

Year (年月日)	: March 25 <sup>th</sup> , 1999 (平成 11 年 3 月 25 日)
University, Department (大学、学部)	: Nagoya University (名古屋大学 工学部 応用化学科)
Undergraduate degree (学位)	: Bachelor of Engineering 学士 (工学)
Major courses (専攻)	: Applied Chemistry (応用化学科)

## Work experience (職歴)

2024.7 ~ Date	Nara Institute of Science and Technology, Graduate School of Science and Technology, Medilux Research Center [Concurrently: Graduate School of Science and Technology, Division of Materials Science] (奈良先端科学技術大学院大学 先端科学技術研究科 メディルクス研究センター [兼 物質創成科学領域])	Professor (教授), Director of Research and Promotion (研究推進部門長)
2019. 4 ~ 2024.7	Nara Institute of Science and Technology, Graduate School of Science and Technology, Division of Materials Science (奈良先端科学技術大学院大学 先端科学技術研究科 物質創成科学領域)	Professor (教授)
2015. 4. ~ 2019.3	Nara Institute of Science and Technology, Institute for Research Initiatives [Concurrently: Graduate School of Science and Technology] (奈良先端科学技術大学院大学 研究推進機構 [兼 先端科学技術研究科])	Associate Professor (特任准教授)
2015. 1. ~ 2015.3	Nara Institute of Science and Technology, Center for frontier science and technology [Concurrently: Graduate School of Materials Science] (奈良先端科学技術大学院大学 先端科学技術研究推進センター [兼 物質創成科学研究科])	Associate Professor (特任准教授)
2014.10. ~ 2018.3.	[兼: JST PRESTO (科学技術振興機構 戦略的創造研究推進事業)]	JST PRESTO Researcher (さきがけ研究者「分子技術と新機能創出」)
2011.4. ~ 2014.12.	Osaka University, The Center for Advanced Engineering and Informatics [Concurrently: Graduate School of Engineering] (大阪大学 臨床医工学融合研究教育センター [兼: 工学研究科])	Specially Appointed Associate Professor (特任准教授)
2006.4. ~ 2011. 3.	Osaka University, The Center for Advanced Engineering and Informatics [Concurrently: Graduate School of Engineering] (大阪大学 臨床医工学融合研究教育センター [兼: 工学研究科])	Specially Appointed Lecturer (特任講師)
2005.4. ~ 2006. 3.	Cornell University, USA (アメリカ合衆国 コーネル大学)	Postdoctoral Associate [Cornell Univ.] (博士研究員 [コーネル大学])
2004.4. ~ 2005. 3.	Japan Society for the Promotion of Science (日本学術振興会)	JSPS Research Fellow PD [Cornell Univ.] (特別研究員 PD [コーネル大学])
2003.4. ~ 2004. 3.	Japan Society for the Promotion of Science (日本学術振興会)	JSPS Research Fellow DC2 [Nagoya Univ.] (特別研究員 DC2 [名古屋大学])

## Academic Society Members (所属学会など)

The Society of Polymer Science, Japan (SPSJ, 高分子学会), The Chemical Society of Japan (CSJ, 日本化学会), Japanese Society for Biomaterials (日本バイオマテリアル学会), The Kinki Chemical Society, Japan (近畿化学協会), The Society of Pure & Applied Coordination Chemistry (先端錯体工学研究会), Research Group on Precisely Designed Network Polymer, member of acting committee (精密ネットワークポリマー研究会). 14<sup>th</sup> Japanese-German Frontiers of Science Symposium (第14回日独先端科学シンポジウム). Research Group on Cycle Rank (サイクルランクの科学). The Society of Rubber Science and Technology, Japan (日本ゴム協会).

## Academic Society Activity (学会活動など)

- 2018.04.~2026.03. : The Society of Polymer Science, Japan: Research Group on Precisely Designed Network Polymer, acting committee (高分子学会, 精密ネットワークポリマー研究会, 運営委員)
- 2019.07.22. : Principal Organizer, Precision Polymer Network Research Group, "Functions Enabled by Grafting Approaches in Network Polymers" The Society of Polymer Science, Japan (July 22, 2019, Morito Memorial Hall, Tokyo University of Science) (高分子学会, 精密ポリマーネットワークポリマー研究会 「ネットワークポリマーのグラフト手法による機能」 [2019年7月22日、東京理科大学森戸記念館開催]、主担当)
- 2019.12.~2020.09. : Session Organizer, Special Topic 21: "Advanced and Emerging Precision Network Polymers," The 69th Symposium on Macromolecules, the Society of Polymer Science, Japan (September 16–18, 2020, Online) (第69回高分子討論会[2020年9月16日~18日オンライン開催], 特定テーマ21. 「活躍する精密ネットワークポリマー」セッションオーガナイザー)
- 2022.04.~2024.03. : The Society of Polymer Science, Japan: Research Group on Precisely Designed Network Polymer, Chairman (高分子学会, 精密ネットワークポリマー研究会, 運営委員長)
- 2022.11.09. : Principal Organizer, The 6th Joint Lecture of the Supramolecular Research Group and the Precision Network Polymer Research Group, The Society of Polymer Science, Japan "Environmentally Compatible Materials Created by Network Polymers and Supramolecules" (November 9, 2022, Korakuen Campus, Chuo University) (高分子学会, 超分子研究会・精密ネットワークポリマー研究会 第6回合同講座、Network Polymer と Supramolecules が織りなす環境適合材料の世界[2022年11月9日、中央大学後楽園キャンパス開催]、主担当)
- 2022.06.~ present : The Society of Polymer Science, Japan: Kansai Regional Chapter, Board members (高分子学会関西支部, 常任幹事)
- 2023.03.~ present : The Chemical Society of Japan, Polymer division, Board members (日本化学会高分子ディビジョン, 幹事)
- 2023.05.~ present : The Society of Polymer Science, Japan, delegate (高分子学会、代議員)
- 2023.07.~2025.03. : NEXT Kobunshi [Kansai] (NEXT 高分子[関西] 企画委員、主担当)
- 2023.08.30. : Principal Organizer, "Polymer Optical Waveguides," Precision Polymer Network Research Group, The Society of Polymer Science, Japan (August 30, 2023, Online Meeting) (高分子学会, 精密ポリマーネットワークポリマー研究会 「ポリマー光導波路」 [2023年8月30日、オンライン開催]、主担当)
- 2013.12.~2024.09. : Session Organizer, Special Topic 18: "Precision Network Polymers Undergoing Diverse Evolution," The 73th Symposium on Macromolecules, the Society of Polymer Science, Japan (September 16–18, 2020, Online) (第73回高分子討論会[2024年9月25日~27日オンライン開催], 特定テーマ18. 「多様な進化を遂げる精密ネットワークポリマー」セッションオーガナイザー)
- 2024.07.~ present : The Society of Polymer Science, Japan, International Exchange Committee, Member (高分子学会、国際交流委員会、委員)
- 2024.10.~2025.05. : Principal Coordinator, The 35th Kansai Young Polymer Researchers Seminar — Polymeric Medical Materials — (May 16, 2025, Nara Institute of Science and Technology) (第35回関西若手高分子セミナー~高分子メディカルマテリアル~ [2025年5月16日、奈良先端科学技術大学院大学開催]、主担当)
- 2025.06.~ present : Organizing Committee Member, The 75th Annual Meeting of the Society of Polymer Science, Japan (May 11–15, 2026, Online Conference) (第75回高分子学会年次大会[2026年5月11日~15日オンライン開催]、運営委員)

## Visiting Lecturer etc. (外部審査、客員教員、招へい教員、非常勤講師など)

2025.12.~2026.3.	Visiting Lecturer at Faculty of Materials Engineering, Kasetsart University, Thailand (タイ国カセサート大学 Materials Engineering, 客員講師, online)
2025.10.-2026.3.	Visiting Lecturer at Division of Applied Chemistry, Graduate School of Engineering, Osaka University, Japan (大阪大学大学院工学研究科 客員教授: 非常勤講師「マテリアル化学特別講義 2/分子創成化学特別講義 3,4/物質機能化学特別講義 3,4」)
2025.4.~2027.3.	Visiting Lecturer at Tokyo University of Science, Special Lecture for Master's Program, Department of Advanced Chemistry, Graduate School of Science and Technology (東京理科大学 非常勤講師「大学院 創域理工学研究科 先端化学専攻 修士課程 特別講義」)
2025.4.~2026.3.	Visiting Professor at Global Center for Medical Engineering and Informatics, Osaka University, Japan (大阪大学 国際医工情報センター 招へい教授)
2025.4.~2025.9.	Visiting Lecturer at Graduate School of Sciences and Technology for Innovation, Tokushima University, Japan (徳島大学理工学部[大学院創成科学研究科] 物質合成化学特論)
2024.12.~2025.3.	Visiting Lecturer at Faculty of Materials Engineering, Kasetsart University, Thailand (タイ国カセサート大学 Materials Engineering, 客員講師, online)
2024.12~2025.2.	Visiting Lecturer at Institute of Science Tokyo, "Special lecture on Organic Macromolecules No.3" 2024 (東京科学大学 2024 年度「有機高分子特別講義第 3」非常勤講師)
2022.4.1~現在	Concurrent Lecturer at Faculty of Engineering, Nara Women's University, Japan (奈良女子大学工学部工学科 兼任講師)
2024.5.10.	Visiting Lecturer at Graduate School of Engineering, Nagoya University, Japan (名古屋大学 非常勤講師)
2022.9.13~9.14.	Visiting Lecturer at Graduate School of Engineering, College of Engineering, Osaka Metropolitan University, Japan (大阪公立大学 非常勤講師)
2023.12.~2024.3.	Visiting Lecturer at Faculty of Materials Engineering, Kasetsart University, Thailand (タイ国カセサート大学 Materials Engineering, 客員講師, online)
2023.2.2~2.14	Visiting Lecturer at Faculty of Materials Engineering, Kasetsart University, Thailand (タイ国カセサート大学 Materials Engineering, 客員講師, online)
2022.2.21~3.23	Visiting Lecturer at Faculty of Materials Engineering, Kasetsart University, Thailand (タイ国カセサート大学 Materials Engineering, 客員講師, online)
2022.1.31.	An external PhD thesis Chairperson for Mr. Junta Sano, at Department of Applied Chemistry, Graduate School of Engineering, Chubu University, Japan (中部大学大学院工学研究科応用科学専攻 佐野潤太氏, 博士学位 外部審査員, 2022 年 1 月 31 日)
2021.4.~現在	Keihanna Corporation, Keihanna Environmental Conservation Committee (株式会社けいはんな、けいはんな環境保全委員)
2020.12.8~12.18	Visiting Lecturer at Faculty of Materials Engineering, Kasetsart University, Thailand (タイ国カセサート大学 Materials Engineering, 客員講師, online)
2020.3.27~28.	An external Master thesis Chairperson for Ms. Natjaya Ekapakul at Kasetsart University, Department of Materials Science, Faculty of Science, Thailand (タイ国カセサート大学 Ms. Natjaya Ekapakul, 修士学位 外部審査員, 2020 年 3 月 27 日-28 日)
2019.11.18~11.21	Visiting Lecturer at Faculty of Materials Engineering, Kasetsart University, Thailand (タイ国カセサート大学 Materials Engineering, 客員講師)
2018.11.29~12.4	Visiting Lecturer at Faculty of Materials Engineering, Kasetsart University, Thailand (タイ国カセサート大学 Materials Engineering, 客員講師)
2018.9.20~22.	Visiting Lecturer at Faculty of Science, Kochi University (高知大学 理学部理学・応用理学科および総合人間自然科学研究科 非常勤講師)
2018.5.9.	An external PhD thesis Chairperson for Ms. Visuta Engkagul at Chulalongkorn University, The petroleum and Petrochemical College, Thailand (タイ国チュラロンコン大学 Dr. Visuta Engkagul 博士学位 外部審査員, 2018 年 5 月 9 日)

## Awards (受賞)

2013, July	Young Scientist Lecture Award; The Society of Polymer Science, Japan and Kansai Region Branch (2013) (第 59 回高分子研究発表会[神戸] ヤングサイエンティスト講演賞 [高分子学会・高分子学会関西支部])
2010, May	Award for Encouragement of Research in Polymer Science; The Society of Polymer Science, Japan (2010) (平成 21 年度 高分子研究奨励賞 [高分子学会])
2010, April	CSJ Presentation Award 2010 (日本化学会第 90 春季年会 優秀講演賞(学術) [日本化学会])
2000, May	Poster Award; The 48 <sup>th</sup> Annual Conference on Mass Spectrometry; The Mass Spectrometry Society of Japan (第 48 回質量分析総合討論会 ポスター賞 [日本質量分析学会])

## Grant (研究助成: 研究代表者として)

2026.4~2027.3	NAKATANI Foundation	公益財団法人 中谷財団	LbL-3D Skin モデル: 新しい交互積層薄膜に用いる抗菌性高分子の創製
2025.12~2027.10	KOSÉ COSMETOLOGY RESEARCH FOUNDATION	公益財団法人 コーセーコスメトロジー研究財団	LbL-3D Skin モデル: 弾性制御とハイスループット評価技術の確立
2025.4~2026.3	Fujita PreA, Fujita Health University	藤田研究開発課題(藤田 preA)	分解しても中性を保つ機能性分解性高分子の高分子量化による力学特性制御と生体適合性評価

2025.1~2025.12	Networked Exchange, United Strength for Stronger Partnerships between Japan and ASEAN	JST 日 ASEAN 科学技術・イノベーション協働連携事業(NEXUS)	グリーンテクノロジーを支える新規材料創出
2024.10~2026.9	IZUMI Science and Technology Foundation	公益財団法人 泉科学技術振興財団	新しい高伸縮性オルガノゲルの創成
2024.11~2028.3	The AMADA Foundation	公益財団法人 天田財団	分解性プラスチックとバイオマスの複合における塑性加工の開発
2024.4~2028.3	Grant in Aid for Scientific Research (B) (General)	科研 基盤研究(B)	大きな双極子モーメントを持つ分解性高分子と多糖類による複合材料
2024.4~2025.6	The Descente and Ishimoto Memorial Foundation for the Promotion of Sports Science	公益財団法人 石本記念デサントスポーツ科学振興財団	衝撃吸収材を目指したキトサン誘導体による新規高分子材料創製
2024.4~2025.3	The Iwatani Naoji Foundation	公益財団法人 岩谷直治記念財団	ガスハイドレート生成防止剤のために構造制御された N-ビニルアミド共重合体の創製
2024.4~2025.3	The Eno Science Foundation	公益財団法人 江野科学振興財団	トリメチレンカーボネートによる分解性ゴムの多様化
2024.4~2025.3	Koyanagi Foundation	公益財団法人 小柳財団	運動器疼痛に適したジバニリンによる新規分解性粒子の調製
2023.12~2024.11	Suzuken Memorial Foundation	公益財団法人 鈴木謙三記念医学応用研究財団	組成制御されたポリトリメチレンカーボネート誘導体薄膜による薬物徐放制御
2023.11~2025.10	Steel Foundation for Environmental Protection Technology	公益財団法人 鉄鋼環境基金	工場排熱エネルギーを高効率で輸送する蓄熱材粒子の創製
2023.10~2024.9	Foundation of Institute for Chemical Fibers, Japan	公益財団法人 日本化学繊維研究所	バイオマス活用を目指した両末端ポリフェノール結合型ポリ乳酸共重合体の創製
2024.3~2025.5	Foundation for Promotion of Material Science and Technology of Japan (MST)	一般財団法人 材料科学技術振興財団	N-ビニルアミドとイソプレンの共重合体を用いた天然ゴム粒子の表面修飾
2023.6~2024.6	The Murata Science Foundation	公益財団法人 村田学術振興財団 第 39 回(2023 年度)研究助成	新しい圧電素子を目指した高い双極子を持つポリトリメチレンカーボネート誘導体の創製
2023.1~2025.3.	Toshiaki Ogasawara Memorial Foundation, General Research Grant	公益財団法人 小笠原敏晶記念財団 一般研究助成	可逆的の化学結合を持つポリマーにおける立体規則性の効果と高分子材料特性
2022.4~2024.3.	Grant in Aid for scientific Research on Innovative Areas (Research in a Proposed Research Area)(Publicly Offered Research)	科研 新学術(公募)	N-ビニルアミドに特徴的な水和挙動解析と化学結合型表面修飾による新規ゲル材料創出
2022.4~2024.3.	JSPS Bilateral Joint Research Projects (Vietnam-Japan)	JSPS 二国間交流事業(共同研究) ベトナム - 日本	「セルロースと天然ゴムを使用する架橋構造を利用した新しい高分子材料創成」(研究代表者:網代広治、ベトナム国側代表者:Nguyen Ha Thu(ベトナム国ハノイ工大))
2022.4~2023.3	Collaborative research with Nara Medical University	令和4年度 公立大学法人奈良県立医科大学との共同研究助成	慢性運動器疼痛に対するカテーテル治療における新規高分子微粒子の開発
2022. 4 ~2024. 3	The Mazda Foundation	公益財団法人 マツダ財団	柔らかい疎なグラフト鎖を有する合成高分子と多糖類とのブレンドによる高分子特性制御
2021.12 ~2022.11	CASIO SCIENCE PROMOTION FOUNDATION	公益財団法人 カシオ科学振興財団	フォトクロミックエレクトロニクスを利用した新しいエステルフリー型分解性高分子材料の分解制御

2021.6 ~ 2024.3.	NEDO Feasibility Study Program	「NEDO 先導研究プログラム/新技術先導研究プログラム」のうち「マテリアル革新技術先導研究プログラム」、研究開発テーマ名:「データ駆動科学によるスマートスケラブルケミストリーの確立」	「データを活用した革新的マテリアル製造プロセスインフォマティクス技術の開発」 研究代表者: 藤井幹也(奈良先端大)、研究分担者: 網代広治(奈良先端大)、松原崇亮(奈良先端大)、宮尾知幸(奈良先端大)、畑中美穂(慶応義塾大学)、大西裕也(JSR 株式会社)、菅原哲徳(JSR 株式会社)
2021.6 ~ 2023.3.	Next Generation Interdisciplinary Research Project	奈良先端科学技術大学院大学 次世代融合領域推進プロジェクト	土壌に用いる機能性生分解性高分子による循環型材料の開発
2020.4 ~ 2024.3	Grant in Aid for Scientific Research (B) (General)	科研 基盤研究(B)	汎用五大高分子の代替となるエステルフリー型生分解性高分子の設計と合成
2020.4 ~ 2022.3	Grant in Aid for scientific Research on Innovative Areas (Research in a Proposed Research Area)(Publicly Offered Research)	科研 新学術(公募)	過酷な環境に調和する N-ビニルアミドを用いた高強度保水材の開発
2020.4 ~ 2022.3	TEPCO Memorial Foundation	公益財団法人 東電記念財団	交互積層薄膜とマンニトール微粒子による高効率蓄熱材料の創製
2020.4 ~ 2022.3	Research Foundation for the Electrotechnology of Chubu	公益財団法人 中部電気利用基礎研究振興財団	N-ビニルアミド系高分子の最適化による革新的ガスハイドレード生成防止剤
2020.4 ~ 2022.3	AMED	AMED 橋渡し研究戦略的推進プログラム 大阪大学 異分野融合型研究シーズ支援研究費	分解しても中性を保つ新しい生体吸収性ス TENT を目指した生分解性高分子材料設計
2019.11~2020.11	JST A-STEP	JST A-STEP 機能検証フェーズ: 試験研究タイプ	うがいによって薬物送達できる高分子材料の創製
2019.10~2023.3	JSPS Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))	JSPS 国際共同研究加速基金(国際共同研究強化(B))	動脈若返りのために複数薬剤徐放と分解をタイムプログラムした高分子材料創製(日本側研究代表者: 網代広治、フランス国側代表者 Prof. Blanca Martin-Vaca, Dr.
2018.4~2022.3	JSPS Bilateral Joint Research Projects (Thailand-Japan)	JSPS 二国間交流事業(共同研究) タイ-日本	「皮膚の創傷治療を目指したキトサンと生体吸収性合成高分子の複合体(日本側研究代表者: 網代広治、タイ国側代表者: Dr. Chantiga Choochottiros, Kasetsart
2018.4 ~ 2020.3	The Asahi Glass Foundation	公益財団法人 旭硝子財団	生体材料応用を目指したセンチビード型ポリウレタンの創製
2017.6 ~ 2020.3.	Next Generation Interdisciplinary Research Project	奈良先端科学技術大学院大学 次世代融合領域推進プロジェクト	免疫応答と生分解性高分子を融合させた機能性高分子の設計と合成
2016.4. ~ 2018.3.	Grant-in-Aid for Challenging Exploratory Research	科研 挑戦的萌芽研究	ペプチドの構造異性体に着目した非分解性の安全な抗菌性高分子材料の創製
2016.4. ~ 2019.3.	TEPCO Memorial Foundation	公益財団法人 東電記念財団	高効率ガスハイドレート防止剤のための高分子合成
2014.10. ~ 2018.3.	JST PRESTO "Molecular Technology"	さががけ「分子技術と新機能創出」	複機能性高分子による循環器治療バイオマテリアルの創出
2014.4. ~ 2016.3.	Grant-in-Aid for Challenging Exploratory Research	科研 挑戦的萌芽研究	ステレオコンプレックスに関わるファンデルワールス力測定と界面接合による接着材料
2014.1. ~ 2015.3.	The Ogasawara Foundation for the Promotion of Science & Engineering	公益財団法人 小笠原科学技術振興財団	キトサンとスルホン含有架橋剤による新規スキャホールドの創製
2012.10. ~ 2013.9.	Sekisui-Kagaku Research-Aid Program on 'The Nature-Guided Materials Processing'.	積水化学 自然に学ぶものづくり研究助成	DNA複製メカニズムを模倣したメタクリル酸誘導体の立体特異性テンプレート重合とその反応機構
2012.4. ~ 2014.3.	Grant-in-Aid for Young Scientists(B)	科研 若手研究(B)	表面カチオン化ポリ(N-ビニルアミド)ゲルを利用した新規薬物徐放制御材料の創製
2012.4. ~ 2014.3.	Arai Science and Technology Foundation	公益財団法人 新井科学技術振興財団	N-ビニルアミド誘導体を用いた石油パイプライン用安定剤の開発
2011.3. ~ 2012.2.	Shorai Foundation for Science and Technology	公益財団法人 松籟科学技術振興財団	残留農薬を除去できる保水材の開発
2010.4. ~ 2011.3.	Showahokokai	財団法人 昭和報公会	立体規則性を有する両親媒性ブロック共重合体を用いたナノ構造体の構築
2010.5. ~ 2011.4.	Tokuyama Science Foundation	公益財団法人 徳山科学技術振興財団	高分子間相互作用を利用した立体規則性ポリスチレンによる新規ナノ反応場創製
2009.10. ~ 2010.9.	Kurita Water and Environment Foundation	公益財団法人 クリタ水・環境科学振興財団	リサイクル可能な有機溶剤回収用機能性ゲルの創製

2009.4. ~2010.3.	The Kinki Regional Invention Center.	公益財団法人 近畿地方発明センター	立体規則性ポリビニルアミンの合成
2009.4. ~2012.3.	Grant-in-Aid for Young Scientists(B)	科研 若手研究 (B)	交互浸漬法を用いたポリイオンコンプレックス相形成によるインテリジェントゲルの創製
2007.4. ~2009.3.	Grant-in-Aid for Young Scientists(start up)	科研 若手研究 (スタートアップ)	N-ビニルアルキルアミドを成分とする高強度ゲルと経皮吸収製剤用基剤の開発

## Publication List

- (1) Yasuhiko Iwasaki\*, Kazuho Maeda, Yota Okuno, Kanako Okuda, **Hiroharu Ajiro**, "Preparation of self-healable, reshapable, and hydrolysable flexible polymer films via crosslinking with five-membered cyclic phosphoesters", *Polym. J.* accepted on 24th February **2026**.
- (2) Naoto Hirano, Hiroaki Yoshida, Tsuyoshi Ando\*, **Hiroharu Ajiro**\*, "High-Molecular-Weight Trimethylene Carbonate Derivatives via La[N(SiMe<sub>3</sub>)<sub>2</sub>]<sub>3</sub> Catalysis: Side-Chain-Directed Thermal and Mechanical Property Control", *Macromolecules*, accepted on 10th Feb. **2026**.
- (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**.
- (4) Shu Morishita, Hiroaki Yoshida\*, Nguyen Thu Ha, Tran Thi Thuy, Nguyen Ngoc Mai, Ryohei Ikura, Sei-ichi Kawahara, **Hiroharu Ajiro**\*, "Investigation of Fracture Stress in Deproteinized Natural Rubber with Poly(trimethylene carbonate) Grafted Microcrystalline Cellulose for Improved Dispersibility", *ACS Omega*, accepted on 31st Dec. **2025**.
- (5) Hikaru Sasaki\*, Naoto Komeno, Takumi Hachimine, Kei Takahashi, Yu-ya Ohnishi, Tetsunori Sugawara, Araki Wakiuchi, Miho Hatanaka, Tomoyuki Miyao, **Hiroharu Ajiro**, Mikiya Fujii, Takamitsu Matsubara, "Robotic System for Chemical Experiment Automation with Dual Demonstration of Endeffector and Jig Operations", *Int. J. Intell. Robot. Appl.*, submitted on 31st July 2025. accepted on 17th August **2025**.
- (6) Nalinthip Chanthaset\*, Utana Narukawa, **Hiroharu Ajiro**\*, "A Sulfobetaine-Modified Poly(butylene succinate) with Fine-Tuned Mechanical and Lubricating Properties in Melted Film Discs", *ACS Appl. Mater. Interface*, accepted on 30th October **2025**.
- (7) Naoto Hirano, Yuto Sasagawa, Hiroaki Yoshida\*, **Hiroharu Ajiro**\*, "Role of Weak and Transient Interactions in Polymer-Free Electrospinning of  $\beta$ -Cyclodextrin Derivatives", *Nanoscale*, Accepted on 3rd December **2025**.
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- (9) Tsuyoshi Ando\*, Hideharu Kurioka\*, Chisato Komura, **Hiroharu Ajiro**, "A New Coating Strategy: Polymer Assembly-assisted Grafting-to Method", *Surf. Interface*, **2025**, 77, 108038.
- (10) Aniruddha Nag, Araki Wakiuchi, Shogo Takasuka, Shigehito Asano, Ryo Hashizume, Miho Hatanaka, Tomoyuki Miyao, Yuya Ohnishi, Takamitsu Matsubara, Tsuyoshi Ando, Tetsunori Sugawara, Mikiya Fujii, **Hiroharu Ajiro**\*, "Investigation on regulated copolymer composition in free radical flow polymerization through tube length variation", *MRS Commun.* **2025**, 15, 1122-1128.
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- (12) Hiroaki Yoshida\*, Takanori Maeno, Ryo Kawatani, Yumi Miyaji, **Hiroharu Ajiro** \*, "Ultra-stretchable Transparent Hydrogels with Low Hydrophobic and Amphiphilic Monomers Using Asymmetric Crosslinker to Give Low Mechanical Hysteresis", *Chem. Eur. J.* **2025**, 31, e00778.
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- (14) Ayaka D. Inoue, Tsuyoshi Ando, Shuta Fukuura, Takashi Yumura, **Hiroharu Ajiro**, Tsuyoshi Kawai, Yoshiyuki Nonoguchi, "Dispersion of carbon nanotubes triggered by helical self-assembly of poly(methyl methacrylate)", *Nanoscale*, **2025**, 17, 18105-18111.
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- (17) Mukmin Sapto Pamungkas, Tsuyoshi Ando\*, **Hiroharu Ajiro**\*, "Copolymer synthesis of N-vinylacetamide and 2-methylene-1,3-dioxepane provides a new degradable polymer", *J. Polym. Sci.* **2025**, 63, 1306-1318. [OPEN ACCESS]
- (18) Anh Nguyen Thi Ngoc, Nam Vu Trung, Minh Vu Tue, Trong Tran Huy, Quynh Nguyen Thi, Hau Than Van, Shu Morishita, Thu Ha Nguyen, **Hiroharu Ajiro**, Thuy Tran Thi\*, "Characterization of deproteinized natural rubber modified via graft copolymerization with styrene/acrylonitrile and reinforced with cellulose nanofibers", *Polym. J.* **2025**, 57, 527-538.
- (19) 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.
- (20) Shogo Takasuka, Sho Ito, Shunto Oikawa, Yosuke Harashima, Tomoaki Takayama, Aniruddha Nag, Araki Wakiuchi, Tsuyoshi Ando, Tetsunori Sugawara, Miho Hatanaka, Tomoyuki Miyao, Takamitsu Matsubara, Yu-ya Ohnishi, **Hiroharu Ajiro**, Mikiya Fujii\*, "Bayesian optimization of radical polymerization reactions in a flow synthesis system", *Sci. Technol. Adv. Mater.: Method*, **2024**, *4*, 2425178. [EDITOR'S CHOICE]
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- (25) Desy Liana, **Hiroharu Ajiro**, Nalinthip Chanthaset\*, Anuchit Phanumartwath\*, "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*, 9294-9305
- (26) Naoto Hirano, Hiroaki Yoshida\*, Tsuyoshi Ando, **Hiroharu Ajiro**\*, "La[N(SiMe<sub>3</sub>)<sub>2</sub>]<sub>3</sub>: A Highly Active Catalyst for the Ring-Opening Polymerization of Trimethylene Carbonate", *J. Polym. Sci.* **2024**, *62*, 4262-4269.
- (27) Malcolm A. Kelland, Mathias Destarac, Olivier Coutelier, Alexis Dupre-Demorsy, Tsuyoshi Ando, **Hiroharu Ajiro**, Erik G. Dirdal, Janronel Pomicpic, "Kinetic hydrate inhibitors – which is best, block or statistical copolymers?", *Energ. Fuel*, **2024**, *38*, 11607-11615.
- (28) Hiroaki Yoshida\*, Kiyonori Nagaoka, **Hiroharu Ajiro**\*, "Agarose nanofiber by electrospinning", *Macromol. Chem. Phys.* **2024**, *225*, 2400155.
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- (31) Nalinthip Chanthaset\*, Nichagarn Greetatom, 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.
- (32) Hiroaki Yoshida\*, Tsurugi Kikukawa, Go Matsuba, **Hiroharu Ajiro**\*, "Chemically bound hydrophobic modification on hydrogel surface with poly(*N*-vinylamide)s", *Polymer* **2024**, *294*, 126695(7).
- (33) Daisuke Aoki, Hiroaki Yoshida, **Hiroharu Ajiro**\*, "Comb polyurethanes Consisting of Hard Segment Backbone and Dangling Soft Segments for Tailoring Mechanical Properties of Thermoplastics", *Macromolecules*, **2024**, *57*(2), 640-651.
- (34) Jaeyeong Choi, **Hiroharu Ajiro**\*, "Proposal of pseudo-capping effects by polymer-polymer interaction through preparation of stereocomplex pseudo-polyrotaxane with cyclodextrin and PEG-PLA triblock copolymers", *Macromol. Chem. Phys.* **2024**, *225*, 2300370(7).
- (35) Rikyu Miyake, **Hiroharu Ajiro**\*, "Investigation of the Mechanical Properties and Degradation of Ester-free Poly(trimethylene carbonate) Derivatives Bearing Various Bulky Aromatic Groups", *Polym. J.* <Special Issue>, **2024**, *56*, 319-333.
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- (37) Malcolm A. Kelland,\* Erik G. Dirdal, Radhakanta Ghosh, **Hiroharu Ajiro**, "Improved gas hydrate kinetic inhibition for 5-methyl-3-vinyl-2-oxazolidinone copolymers and synergists", *ACS Omega*, **2023**, *8*, 28859-28865.
- (38) Shohei Shimizu, Hiroaki Yoshida, Koichi Mayumi, **Hiroharu Ajiro**, Yoshimitsu Sagara\*, "Mechanochromic luminescence of phase-separated hydrogels that contain cyclophane mechanophores", *Mater. Chem. Front.* **2023**, *7*, 4073-4079.
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