

2019-2020.7.25現時点までの公表論文（審査付き・国際、24報）

現役生: 米原卓哉(D1)は論文3報、駒場京花(M2)は5報 (+日本語著作1)公表の活躍

- 1) Akiko Yatsu, Takuya Yonehara and Hiromasa Goto, Induction of Polyacetylene to a Chiral Smectic Liquid Crystal–Chiral Direct Conversion, *Polymers* 2020, 12, 1547.
- 2) **Kyoka Komaba** & Hiromasa Goto (2020) Direct bio-interface preparation for *Spirulina* and conductive polymer composite, *International Journal of Polymeric Materials and Polymeric Biomaterials*, DOI: 10.1080/00914037.2020.1746659
- 3) Akiko Yatsu, Takuya Yonehara, Hiromasa Goto, Preparation of poly(thiophene-alt-pyrrole) bearing chiral liquid crystal group, *Polymer-Plastics Technology and Materials*, Accepted on Jun 24, 2020.
- 4) Naoto Eguchi, Hiromasa Goto, Relationship between polarons and optical activity for conductive polymer/hydroxypropyl cellulose composite, *Journal of Polymer Science*, Web published on 08 June 2020.
- 5) **Takuya Yonehara**, Hiroki Hayashi, Shigeki Nimori, National Institute for Materials Science (NIMS), Tsukuba, Japan, Hiromasa Goto, Vapor treatment, liquid crystal formation, magnetic orientation, and crystallization (VLMC) to form helical polyisocyanides with oriented crystal-like structure, *Journal of Applied Polymer Science*, Web published, 31 May 2020.
- 6) **Kyoka Komaba**, Hiromasa Goto, Soliton excitations in liquid crystal polyacetylene, *Molecular Crystals and Liquid Crystals*, accepted.
- 7) Akiko Yatsu, Hiromasa Goto, Preparation of a cellulose-polyphenylacetylene-polyaniline composite, *Journal of the Textile Institute*, 2020.6.19, accepted.
- 8) **Kyoka Komaba**, Shota Hirokawa & Hiromasa Goto, Preparation of biocarbon micro coils, *Soft Materials*, ISSN: 1539-445X (Print) 1539-4468, DOI: 10.1080/1539445X.2020.1740259, Published online: 01 Apr 2020.
- 9) **Kyoka Komaba** & Hiromasa Goto, Direct bio-interface preparation for *Spirulina* and conductive polymer composite, *International Journal of Polymeric Materials and*

Polymeric Biomaterials, DOI: 10.1080/00914037.2020.1746659, Published online:  
06 Apr 2020.

- 10) **Takuya Yonehara**, Kyoka Komaba, Hiromasa Goto, Synthesis of Polyaniline in Seawater. *Polymers*, 12, 375. (2020)
- 11) **Yonehara, T.**; Goto, H. Synthesis of Polyaniline/Scarlet 3R as a Conductive Polymer. *Polymers*, 12, 579 (2020).  
2019
- 12) Akiko Yatsu, Hiromasa Goto, Conductive polymer composites prepared in volcanic spring water, *Futurum-Tsukuba Science Journal*, 4, 59-62 (2019).
- 13) **Kyoka Komaba**, Hiromasa Goto, Isothianaphthene-Based Polymer with Triple Chiral Side Chains, *Futurum-Tsukuba Science Journal*, 1, 63-65 (2019).
- 14) Kohei Yamabe, Nobuhiko Nomura, Hiromasa Goto, Biological quorum sensing molecule-metal complex produces  $\pi$ -conjugated polymer, *International Journal of Polymeric Materials and Polymeric Biomaterials*, 68, 13, 805-809 (2019)
- 15) Naoto Eguchi, Hiromasa Goto, Electrochemical Synthesis of Poly(3,4-ethylenedioxythiophene) Film Having Dot Structures for Diffraction Grating, *ACS Appl. Mater. Interfaces*, 11, 33, 30163-30175 (2019).  
<https://doi.org/10.1021/acsami.9b04767>
- 14) **Kyoka Komaba**, Hiromasa Goto, Simultaneous Polymerization-dyeing for Helical Vessels via Oxidative Coupling with Bach Reaction, *Futurum-Tsukuba Science Journal*, 1, 53-56 (2019).
- 15) Naoto Eguchi, Hiromasa Goto, An Attempt of Double Step Polymerization of 3,4-Ethylenedioxythiophene in Cholesteric Liquid Crystal, *Futurum-Tsukuba Science Journal*, 1, 57-58 (2019).
- 16) Masashi Otaki, Reiji Kumai, Hiromasa Goto, Synthesis of methyl-substituted azobenzene-carbazole conjugated copolymers with photoinduced structural changes,

Journal of Polymer Science Part A: Polymer Chemistry, **57**, 1756-1764 (2019).  
<https://doi.org/10.1002/pola.29445>

- 17) Hiroki Hayashi, Ryosuke Kikuchi, Reiji Kumai, Masaki Takeguchi and Hiromasa Goto, Rod-shaped 1D polymer-assisted anisotropic self-assembly of 0D nanoparticles by a solution-drying method *Journal of Materials Chemistry C*, 2019, **7**, 7442 – 7453  
<https://doi.org/10.1039/C9TC00702D>
- 18) Masashi Otaki, Hiromasa Goto, Helical Spin Polymer with Magneto-Electro-Optical Activity, *Macromolecules*, **52** (9), pp 3199–3209 (2019). DOI: 10.1021/acs.macromol.9b00274
- 19) Masashi Otaki, Reiji Kumai, Hajime Sagayama, and Hiromasa Goto, Synthesis and Properties of Chiral Polyazobenzenes with Photoinduced Change in Optical Activity, *Macromolecules*, **52** (6), pp 2340–2348 (2019), DOI: 10.1021/acs.macromol.8b02588
- 20) Masashi Otaki, Shota Hirokawa and Hiromasa Goto Synthesis of Carbon Showing Weak Antiferromagnetic Behavior at a Low Temperature, *Condensed Matter*, **4**(1), 33 (2019).
- 21) Masashi Otaki, Reiji Kumai, Hajime Sagayama, and Hiromasa Goto, Synthesis of Polyazobenzenes Exhibiting Photoisomerization and Liquid Crystallinity, *Polymers*, **11**(2), 348 (2019).
- 22) H. Goto, Liquid Crystal Auto-Induction and Amplification Function for Circularly Polarized Luminescence (CPL) with High gem-Value, and Dynamically Controllable CPL Devices, *Molecular Crystals and Liquid Crystals*, **669**, 27-35 (2018).
- 23) Naoto Eguchi, Takashui Sato, Hiromasa Goto, Chemical-Electrochemical Sequential Double-Step Polymerization in Liquid Crystal Allows for Imprinting of 3D Molecular Assembly Form Showing Electro-Chiroptical Effect, *ACS Applied Polymer Materials*, **1**, 197-203 (2019).
- 24) Haoyue Shen, Masashi Otaki, Hiromasa Goto, Blend Electrolyte Solution Showing Smectic A for Electro-synthesis of  $\pi$ -Conjugated Polymer, *Futurum-Tsukuba Science Journal*, **4**, 47-52 (2019).

## 著作

- 1) 駒場京花、後藤博正、ポリマーアロイ・ポリマーブレンド —設計技術と実用化事例—PolymerAlloy/Polymer Blend —Design Technology and Practical Applications—シーエムシー出版2020.2.25  
[https://www.cmcbooks.co.jp/products/detail.php?product\\_id=5787](https://www.cmcbooks.co.jp/products/detail.php?product_id=5787)
- 2) 後藤博正、エレクトロクロミックデバイスの開発最前線, シーエムシー出版、2019.6.27  
[https://www.cmcbooks.co.jp/products/detail.php?product\\_id=5649](https://www.cmcbooks.co.jp/products/detail.php?product_id=5649)

## 社会貢献活動（一般講演・面白実験）11件

### 2019.4.20

- 1) 科学技術週間、筑波大学、環境・エネルギーのための科学と技術：体験実験とポスター展、4月20日（土）10:00～16:00、小学高学年以上対象

### 2019.7.5

- 2) 並木中等教育学校高校2年、講演（2クラス）講演：理工学と研究 物質工学に関する研究の歴史と内容および現在の研究

### 2019.7.29

- 3) 筑波大学研究室体験学習  
茨城県立竹園高等学校国際科2年 化学ゼミ生徒

### 2019.8.1

- 4) 高校生・中学生ラジオ製作教室（竹園高校と竹園東中学校参加（生徒・先生）  
筑波大 3G208 室

### 2019.11.10

- 5) 筑波大学高大連 GFEST 白川先生教室の手伝い

### 2019.11.14

- 6) 静岡県星稜高校にて大学模擬授業

2019-2020.7までの活動実績  
後藤研究室 Goto lab.

**2019.11.16-17**

7) つくば科学フェスティバル 2019 に出展

**2020.1.30**

8) 茨城県立竹園高等学校国際科研究発表会

**2020.1.18**

9) つくば理科学シンポジウム開催

**2019 年度**

10) 高校研究メンター（竹園高校）

2019 年度受賞

米原卓也 博士前期 数理物質科学研究科 研究科長賞

谷津晃子 茗溪賞受賞(大学の学術活動)

江口直人 学長表彰 (総代)

江口直人 茗溪賞受賞(面白実験・社会貢献活動)

江口直人 日本磁気科学会研究奨励賞

(江口: <http://www.magneto-science.jp/Awards/AwardsK.pdf>)

**研究留学**

伊藤蒞杏: グルノーブル大学 (フランス)