

Curriculum Vitae

## Yoshiaki Uchida



Graduate School of Engineering Science  
Osaka University  
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Born: Dec. 30, 1981, Chiba, Japan.

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### Research Interests

Organic Materials Chemistry, Soft Matter Physics and Physical Chemistry:

- Synthesis of Liquid Crystals Containing Nitroxide Radical Moieties
- Fabrication of Liquid Crystal Emulsions
- Electron Paramagnetic Resonance Spectroscopy of the Liquid Crystals
- Defect Structure in Liquid Crystals
- Magnetically Controlled Functional Materials
- Magnetically Manipulated Systems

### Education

Kyoto University

Ph.D. in Human and Environmental Studies, 2009. (Advisor: Prof. R. Tamura).

Dissertation title: "Studies on Magnetic, Electric, and Optical Properties in the Condensed Phase of Nitroxide Radicals"

A.M. in Human and Environmental Studies, 2006.

Dissertation title: "Synthesis and Properties of Paramagnetic Organic Compounds"

B.S. in Integrated Human Studies with Honors, 2004

### Employment

2008.4–2010.3 Research Fellow of the Japan Society for the Promotion of Science, Graduate School of Human and Environmental Studies, Kyoto University

2009.6-2010.3 Post-doc in Weitz Lab, School of Engineering and Applied Sciences, Harvard University

2010.4-2011.9 Research Fellow of the Japan Society for the Promotion of Science, Graduate School of Science, Kyoto University

2011.10-2012.3 Part-time Lecturer, Institute for the Promotion of Excellence in Higher Education, Kyoto University (concurrent post)

2011.10-2014.9 Assistant Professor, Graduate School of Engineering Science, Osaka University

2012.11-2013.1 Visiting Scholar in Weitz Lab, School of Engineering and Applied Sciences, Harvard University

2013.10-2017.3 Japan Science and Technology Agency, PRESTO (concurrent post)

2014.10- Associate Professor, Graduate School of Engineering Science, Osaka University

### Societies

The Society of Chemical Engineers, Japan

American Chemical Society

The Chemical Society of Japan  
The Physical Society of Japan  
Japanese Liquid Crystal Society  
International Liquid Crystal Society  
Japanese Society for Molecular Science  
The Society of Electron Spin Science and Technology  
The Society of Polymer Science, Japan

### **Awards**

- 12) The JLCS Best Paper Award, Japanese Liquid Crystal Society, 2023. [Paper No. 114]
- 11) Osaka University Prize, Osaka University, 2020.
- 10) The Young Scientists' Award, The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology, 2020.
- 9) The JLCS Best Paper Award, Japanese Liquid Crystal Society, 2017. [Paper No. 44]
- 8) The SCEJ Award for Outstanding Young Researcher, The Society of Chemical Engineering, Japan, 2016.
- 7) Presidential Award for Encouragement, Osaka University, 2015.
- 6) Presidential Award for Encouragement, Osaka University, 2014.
- 5) SEST Young Investigator Award, The Society of Electron Spin Science and Technology, 2013.
- 4) SEST Excellent Presentation Award, The 51st Annual Meeting of the Society of Electron Spin Science and Technology, 2012.
- 3) The JLCS Best Paper Award, Japanese Liquid Crystal Society, 2011. [Paper No. 17]
- 2) The JLCS Young Researcher's Award, Japanese Liquid Crystal Society, 2009.
- 1) Poster Award, International Molecular Chirality Conference in Toyama, 2006.

### **Lectures**

- 62) "Three-dimensionally printed microwell for observing single liquid crystalline shell," SPIE Photonics West OPTO, The Moscone Center, San Francisco, California, USA, January 31, 2024.
- 61) "液晶の基礎と応用," 化学・生命大学院特別講義 II, 豊橋技術科学大学, July 14, 2023.
- 60) "Cholesteric Liquid Crystalline Shells," Weitz Lab, School of Engineering and Applied Sciences, Harvard University, Cambridge, MA, USA, June 30, 2023.
- 59) "液晶を反応場とした材料のナノシート化," 第412回化学研究会セミナー, 福井大学工学部, December 6, 2022.
- 58) "Control of Size, Position and Orientation of Photonic LC Shells," OLC2021 Satellite Work Shop (SWS) 2022, Bankoku Shinryokan, Nago, Okinawa, Japan, September 26, 2022.
- 57) "液晶中の分子間相互作用," 第5回 QLC 若手コロキウム「古典的液晶と量子液晶の関係探索」, Online (Zoom), November 25, 2021.
- 56) "分子の動きが目で見える「液晶」の仕組み," 学問発見講座, 大阪府立茨木高等学校, Osaka, Japan, July 10, 2021.
- 55) "液晶の分子設計のための分子論," 九州大学 IMI 共同利用・短期共同研究公開講演会「機能性液晶の探索に向けたトポロジー手法」, Online (Zoom), February 4, 2021.

- 54) “XMCD-PEEMによる液晶観察—微弱な磁気相互作用のイメージング—,” 量子ビームによる表面界面の光機能探究研究会, Online (WebEx), October 9, 2020.
- 53) “テンプレートとしての液晶,” 講演会, Online (ZOOM), July 6, 2020.
- 52) “液晶の機械学習で見えてきたこと,” 講演会, Online (ZOOM), July 6, 2020.
- 51) “常磁性液晶へのスピン注入による新機能創出,” 新学術領域「量子液晶の物性科学」A01 班公募研究キックオフミーティング, Online (ZOOM), May 19, 2020.
- 50) “液晶の機能化の場としてのマイクロカプセルの開発~分業を超えた異分野融合~, ” 講演会, 秩父小鹿野温泉旅館梁山泊, Ogano, Saitama, Japan, July 28, 2019.
- 49) “ソフトテンプレート法を用いた材料合成プロセス,” 講演会, 富士フイルム株式会社材料生産本部, Minamiashigara, Kanagawa, Japan, July 19, 2019.
- 48) “Importance of Molecular Mobility of Nitroxide Radical Liquid Crystals,” The 6th Awaji International Workshop on “Electron Spin Science & Technology: Biological and Materials Science Oriented Applications” (6th AWEST 2019), Awaji Yumebutai International Conference Center, Awaji, Hyogo, Japan, June 18, 2019.
- 47) “穴あきインク 鋳型法を用いた規則性多孔体の開発,” 技術情報協会, 技術情報協会セミナーーム, Tokyo, Japan, April 22, 2019.
- 46) “Photonic Microcapsule with Magnetic LC Shell,” SPIE Photonics West OPTO, The Moscone Center, San Francisco, California, USA, February 3, 2019.
- 45) “ソフトテンプレート法による機能性材料の成形,” 第2回メディショナルナノテク研究会, キャンパスプラザ京都, Kyoto, Kyoto, Japan, October 19, 2018.
- 44) “Nanosheet Formation in Sandwich-like Reaction Field,” 9<sup>th</sup> Italian-Japanese Workshop on Liquid Crystals, Collegio Cairoli, Pavia, Italy, September 17, 2018.
- 43) “液晶の新しい物性を引き出すための階層間接続に基づく分子設計,” 液晶交流会, 岐阜大学サテライトキャンパス, Gifu, Gifu, Japan, September 3, 2018.
- 42) “Materials Synthesis in Liquid Crystal,” Weitz Lab Group Meeting, School of Engineering and Applied Sciences, Harvard University, Cambridge, MA, USA, August 21, 2018.
- 41) “Functionalization by Self-Assembly in Soft Matter,” Seminar, Department of Chemistry, Queen's University, Kingston, Ontario, Canada, August 13, 2018.
- 40) “Complex fluids consisting of molecules communicating with each other,” The 2nd Joint Alumni Association of Tamura and Tsue Research Groups, 京都大学大学院人間・環境学研究科, Kyoto, Kyoto, Japan, May 19, 2018.
- 39) “分子集団の記憶とコミュニケーション,” 講演会, 大阪大学豊中キャンパス, Toyonaka, Osaka, Japan, April 4, 2018.

- 38) “新規ナノシート合成法が拓く次世代コスメティックテクノロジー,” 化粧品開発展アカデミックフォーラム, 幕張メッセ, Chiba, Chiba, Japan, January 25, 2018.
- 37) “液晶の特徴と機能—配向と流動性は使しよう,” 講演会, 北里大学相模原キャンパス, Sagamihara, Kanagawa, Japan, January 24, 2018.
- 36) “Fabrication and Functions of Liquid Crystalline Microcapsules,” Progress In Electromagnetics Research Symposium, Nanyang Technological University, Singapore, November 20, 2017.
- 35) “ニトロキシドラジカル液晶シェル,” 第7回ソフトマター研究会, 京都大学吉田キャンパス, Kyoto, Japan, October 24, 2017.
- 34) “ソフトマターにおけるラジカルの磁気スイッチ機能,” 「パラダイム変化を導く有機開殻系機能分子種の創製と制御」に関するシンポジウム, 京都大学宇治キャンパス, Kyoto, Japan, September 16, 2017.
- 33) “Magnetically Controllable Liquid Crystalline Shell,” Invited Seminar at the CNR Institute of Membrane Technology, Padova Section, Padova, Italy, September 8, 2017.
- 32) “液晶マイクロカプセルの多彩な機能,” 第161回東海高分子研究会講演会, 西浦温泉ホテルたつき, Aichi, Japan, September 2, 2017.
- 31) “ディスプレイに続く「液晶」の展開,” 第39回公開講座, 大阪大学基礎工学部, Osaka, Japan, August 2, 2017.
- 30) “分子材料の相転移挙動の予測,” PresTop 第1回ミーティング, 京都大学, Kyoto, Japan, August 1, 2017.
- 29) “ディスプレイに使うだけではもったいない「液晶」の多彩な機能,” 学問発見講座, 大阪府立茨木高等学校, Osaka, Japan, July 15, 2017.
- 28) “Liquid Crystalline Shell: as a Material and as a Field,” Physics Seminar, Room BSC 1.04, Campus Limpertsberg, The University of Luxembourg, Luxembourg, Luxembourg, March 20, 2017.
- 27) “機能性流体マイクロカプセルの作製法の開発とその応用に関する研究,” 化学工学会第82年会, 芝浦工業大学, Tokyo, Japan, March 7, 2017.
- 26) “機能性材料合成のためのソフトテンプレート法,” 高分子同友会勉強会, 高分子同友会会議室, Tokyo, Japan, February 20, 2017.
- 25) “三次元規則性多孔ポリマー,” メディカルジャパン 2017 大阪 研究成果企業化促進セミナー, インテックス大阪, Osaka, Japan, February 17, 2017.
- 24) “Nanosheet Synthesis in Hyperswollen Lyotropic Lamellar Phase,” The 12th International Conference on Nano-Molecular Electronics, Kobe International Conference Center, Kobe, Japan, December 14, 2016.
- 23) “液晶エマルションの自己組織的構造形成と機能発現,” 日本学術振興会情報用有機材料第142委員会合同研究会, PORTA 神楽坂, Tokyo, Japan, November 18, 2016.

- 22) “磁気液晶効果とフォトニック構造を利用した有機磁気光学素子の開発,” 第6回CSJ化学フェスタ, タワーホール船堀, Tokyo, Japan, November 16, 2016.
- 21) “ソフトテンプレートをを用いた機能性材料合成,” 講演会, 日本合成化学工業株式会社, Ibaraki, Osaka, Japan, October 24, 2016.
- 20) “マイクロ流体デバイスを用いた三次元規則性多孔フィルムの作製,” 内田幸明, 岩井陽典, 西山憲和, 藪浩, 第65回高分子討論会, 神奈川大学横浜キャンパス, Yokohama, Kanagawa, Japan, September 15, 2016.
- 19) “Cholesteric Liquid Crystalline Microcapsule as Multifunctional Photonic System,” The 8th Japanese-Italian Liquid Crystal Workshop, Kyoto International Conference House (Kokoka), Kyoto, Japan, July 5, 2016.
- 18) “ニトロキシドラジカル液晶の分子設計と物性,” 第20回液晶化学研究会シンポジウム, 東京大学山上会館, Tokyo, Japan, July 4, 2016.
- 17) “ディスプレイを超える応用を指向した液晶材料開発における熱分析,” 有機合成分野・社内向け講演会, 島津共済会館, Kyoto, Japan, June 4, 2016.
- 16) “Magnetic Liquid Crystals without Metals,” Japan-Germany-Workshop on “Molecular Technology,” Wallstreet Hotel, Berlin, Germany, March 18, 2016.
- 15) “Organic Radical Fluids: Magnetism and Microfluidics,” Soft matter seminar, Sreda, Seminaraska soba fizike, F5, IJS, Ljubljana, Slovenia, March 16, 2016.
- 14) “マイクロ流体デバイス,” 第2回JST さきがけ「分子技術と新機能創出」研究者とJACIとの交流会, 新化学技術推進協会, Tokyo, Japan, January 12, 2016.
- 13) “Inhomogeneity of Intermolecular Magnetic Interactions in Liquid Crystalline Phases of Nitroxide Radicals,” The International Chemical Congress of Pacific Basin Societies 2015, Hawaii Convention Center, Honolulu, HI, USA, December 19, 2015.
- 12) “Magnetic Interactions in Liquid Crystalline Phases of Nitroxide Radicals,” 1st International Caparica Christmas Congress on Translational Chemistry 2015, Aldeia dos Capuchos Golf & SPA, Caparica, Portugal, December 10, 2015.
- 11) “分業を超えた異分野融合を目指して,” 第6回さきがけ研究者交流会, JST 東京本部, Tokyo, Japan, August 1, 2015.
- 10) “Luminescence enhancement in cholesteric liquid crystalline microcapsules,” EMN Qingdao Meeting 2015, Grand Regency Hotel, Qingdao, China, June 16, 2015.
- 9) “Magnetically-controllable all-organic droplets and capsules,” the EMN Meeting on Droplets 2015, The Holiday Inn Resort Phuket, Phuket, Thailand, May 10, 2015.
- 8) “磁気液晶効果とフォトニック構造を利用した有機磁気光学素子の開発,” 日本化学会第95春季年会, 日本大学, Funabashi, Chiba, Japan, March 27, 2015.

- 7) “Cholesteric liquid crystalline core-shell emulsion droplets,” EMN Summer Meeting, The Westin Resort & Spa, Cancun, Mexico, June 11, 2014.
- 6) “液晶エマルションの自己組織的構造形成と光学的性質,” 第2回自己組織化プロセスサロン, 関西大学飛鳥文化研究所, Nara, Japan, January 10, 2014.
- 5) “Nonuniform Intermolecular Magnetic Interactions in Nitroxide Radical Liquid Crystals,” The 7th Japanese-Russian Workshop on Open Shell Compounds and Molecular Spin Devices, Awaji Yumebutai, Hyogo, Japan, November 19, 2013.
- 4) “常磁性有機ラジカル液晶の磁性に関する研究,” 第52回電子スピンサイエンス学会年会, 奨励賞受賞記念講演, 大宮ソニックシティ, Saitama, Japan, October 25, 2013.
- 3) “スピンを持つ有機化合物の液晶相における分子間相互作用,” 第1回液晶若手勉強会, 田沢湖高原温泉郷プラザホテル山麓荘, Akita, Japan, September 27, 2013.
- 2) “Magnetic Interactions Observed in All-Organic Nitroxide Radical Liquid Crystals,” MDF Workshop “Open-shell Organic Molecules— Synthesis and Electronic Structure Freedom”, Umeda Sky Building, Osaka, Japan, October 7, 2011.
- 1) “Paramagnetic Liquid Crystals without Metals,” Brandeis NRSEC Seminar, Brandeis University, Waltham, MA, March 11, 2010.

## Papers

- 136) “Exploring the effect of Brønsted acidity of MFI-type zeolites on catalytic cracking temperature of low density polyethylene,” S. Tsubota, S. Kokuryo, K. Tamura, K. Miyake, Y. Uchida, A. Mizusawa, T. Kubo, N. Nishiyama, *Catal. Sci. Technol.*, The Royal Society of Chemistry, in press.
- 135) “Fluoropyridine-medicated zeolite templating method for N/F co-doped carbon with high electrocatalytic performance on oxygen reduction reaction,” Y. Taniguchi, S. Kokuryo, R. Takada, X. Yang, K. Miyake, \* Y. Uchida, N. Nishiyama, *Electrochem. Commun.*, Elsevier, **160**, 107665 (2024).
- 134) “Promoted propane dehydrogenation over Co confined within core-shell silicalite-1 zeolite crystals,” S. Kubota, T. Sumi, H. Kitamura, K. Miyake, Y. Uchida, N. Nishiyama, *Catal. Sci. Technol.*, The Royal Society of Chemistry, in press.
- 133) “Synthesis of pyridinic N-rich N-doped carbon by a zeolite template method using pyridine as a deposition source,” Y. Taniguchi, S. Kokuryo, R. Takada, X. Yang, K. Miyake, Y. Uchida, N. Nishiyama, *Carbon Reports*, in press.
- 132) “Control of Composition and Surface Area of Aluminosilicates by Tuning Base Catalyst Concentration,” J. A. Hernandez Gaitan, K. Sasaki, K. Miyake, Y. Uchida, \* N. Nishiyama, *Chem. Lett.*, The Chemical Society of Japan, **53**, upad034 (2024).
- 131) “Facile synthesis of carbon co-doped with nitrogen and phosphorus as metal-free electrocatalyst with precisely controlled pore structure and dual heteroatoms for oxygen reduction reaction,” R. Takada, \* Y. Shu, Y. Taniguchi, X. Yang, K. Miyake, \* Y. Uchida, N. Nishiyama, *Carbon*, Elsevier, **218**, 118719 (2024).
- 130) “Facile Synthesis of N-Doped Metal-Free Catalysts for Oxygen Reduction Reaction via a Self-

Sacrificed Template Method Using Zinc Amino-Acid Complex,” Y. Shu, R. Takada, Y. Taniguchi, X. Yang, K. Miyake,\* Y. Uchida, N. Nishiyama, *ACS Omega*, American Chemical Society, **8**, 46276–46283 (2023).

**129)** “Dry Reforming of Methane with Suppressed Carbon Deposition over Cr- and Ni-Loaded Dealuminated  $\beta$  Zeolites,” K. Tamura, D. Murata, T. Sumi, S. Kokuryo, H. Kitamura, S. Tsubota, K. Miyake,\* Y. Uchida, M. Miyamoto, N. Nishiyama, *Energy Fuels*, American Chemical Society, **37**, 18945–18951 (2023).

**128)** “Stable and selective conversion of ethylene to propylene and butylene using Ni-loaded dealuminated Beta zeolite catalyst,” H. Kitamura, T. Sumi, S. Kubota, S. Kokuryo, K. Tamura, K. Miyake,\* Y. Uchida, M. Miyamoto, N. Nishiyama, *Appl. Catal. A: Gen.*, Elsevier, **668**, 119429 (2023).

**127)** “Utilization of Deposited Coke on Zeolites During the Catalytic Cracking of Nitrogen-Containing Polymer for the Oxygen Reduction Reaction,” S. Kokuryo,\* Y. Shu, R. Takada, Y. Taniguchi, K. Miyake,\* Y. Uchida, G. Alemany-Molina, E. Morallón, D. Cazorla-Amorós, N. Nishiyama, *Adv. Sustain. Syst.*, Wiley, **7**, 2370035 (2023). **Back Cover**

**126)** “Facile and Cost-effective Synthesis of CoP@N-doped Carbon with High Catalytic Performance for Electrochemical Hydrogen Evolution Reaction,” X. Yang, Y. Shu, R. Takada, Y. Taniguchi, K. Miyake,\* Y. Uchida, N. Nishiyama, *Chem. Asian J.*, Wiley, **18**, e202300534 (2023).

**125)** “Coking Reduction of Cr-loaded Beta Zeolite during Polymer Cracking: Hydrocracking of Aromatics by Synergistic Effect of Cr<sup>6+</sup> and Zeolitic Acid Sites,” S. Kokuryo,\* K. Tamura, S. Tsubota, K. Miyake,\* Y. Uchida, A. Mizusawa, T. Kubo, N. Nishiyama, *ChemCatChem*, Wiley, **15**, e202300461 (2023). **Front Cover**

**124)** “A zeolite templating method for fabricating edge site-enriched N-doped carbon materials,” Y. Taniguchi, Y. Shu, R. Takada, K. Miyake,\* Y. Uchida, N. Nishiyama, *Nanoscale Adv.*, The Royal Society of Chemistry, **5**, 4233–4239 (2023).

**123)** “Lasing Behavior of a Nematic Liquid Crystal Microdroplet Depending on Irradiation Position,” Y. Uchida,\* M. Kumazaki, T. Naruta, N. Nishiyama *Opt. Mater. Express*, Optical Society of America, **13**, 1609-1615 (2023).

**122)** “Experimental and Theoretical Elucidation of Metal-free Sulfur and Nitrogen Co-doped Porous Carbon Materials with an Efficient Synergistic Effect on the Oxygen Reduction Reaction,” Y. Shu,\* Y. Takada, R. Takada, Y. Taniguchi, K. Miyake,\* Y. Uchida, C. Y. Kong, N. Nishiyama, *Adv. Mater. Interfaces*, Wiley-VCH, in press.

**121)** “Improved methane dehydroaromatization reaction over Mo and Cr co-doped ZSM-5 catalyst,” K. Miyake,\* T. Sumi, S. Kokuryo, H. Kitamura, J. A. Hernandez Gaitan, Y. Uchida, N. Nishiyama, *New J. Chem.*, The Royal Society of Chemistry, in press.

**120)** “Detection of alkali and alkaline earth metal ions using birefringence of hyperswollen lamellar phase,” K. Sasaki, S. Matoba, Y. Uchida,\* N. Nishiyama, *RSC Adv.*, The Royal Society of Chemistry, **13**, 4007–4010 (2023).

**119)** “Formation of Ni species anchored on silicalite-1 zeolite framework as a catalyst with high coke deposition resistance on dry reforming of methane,” T. Sumi, D. Murata, H. Kitamura, S. Kubota, K.

Miyake,\* Y. Uchida, M. Miyamoto, N. Nishiyama, *Cryst. Growth Des.*, American Chemical Society, in press.

**118)** “Solvent-free soft-template synthesis of highly-ordered mesoporous carbons via self-assembly promoted by Mg(NO<sub>3</sub>)<sub>2</sub>,” X. Li, H. Yoshikawa, K. Ishihara, K. Miyake,\* Y. Uchida, N. Nishiyama, *Langmuir*, American Chemical Society, **39**, 2036–2042 (2023).

**117)** “Through-Space Magnetic Interaction of cis-Azobenzene Biradical,” Y. Uchida,\* K. Hino, T. Kato, R. Tamura, *Cryst. Growth Des.*, American Chemical Society, **23**, 1641–1647 (2023). **Supplemental Cover**

**116)** “High coke deposition resistance by Cr loading on zeolite defects: reduced regeneration in cracking reactions,” S. Kokuryo,\* K. Tamura, K. Miyake,\* Y. Uchida, A. Mizusawa, T. Kubo, N. Nishiyama, *Catal. Sci. Technol.*, The Royal Society of Chemistry, **12**, 7270–7274 (2022).

**115)** “A Nanosheet Molding Method to Estimate the Size of Bilayers Suspended in Liquid,” K. Sasaki, J. A. Hernandez Gaitan, Y. Tokuda, K. Miyake, Y. Uchida,\* N. Nishiyama, *J. Mater. Chem. C*, The Royal Society of Chemistry, **10**, 15816–15821 (2022). **Inside Back Cover**

**114)** “Amorphous Aluminosilicate Nanosheets as Universal Precursors for the Synthesis of Diverse Zeolite Nanosheets for Polymer-Cracking Reactions,” K. Sasaki, J. A. Hernandez Gaitan, T. Okue, S. Matoba, Y. Tokuda, K. Miyake, Y. Uchida,\* N. Nishiyama, *Angew. Chem. Int. Ed.*, Wiley-VCH, **61**, e202213773 (2022).

**113)** “Amino-Acid-Functionalized Metal–Organic Frameworks as Excellent Precursors toward Bifunctional Metal-Free Electrocatalysts,” Y. Shu,\* Y. Fujimoto, Y. Taniguchi, K. Miyake,\* Y. Uchida, N. Nishiyama, *ACS Appl. Energy Mater.*, American Chemical Society, **5**, 11091–11097 (2022).

**112)** “Mg and Zn co-doped mesoporous ZSM-5 as an ideal catalyst for ethane dehydroaromatization reaction,” T. Sumi, S. Kokuryo, Y. Fujimoto, X. Li, K. Miyake,\* Y. Uchida, N. Nishiyama, *Catal. Sci. Technol.*, The Royal Society of Chemistry, **12**, 7010–7017 (2022).

**111)** “Photo-orientation and Electron Paramagnetic Resonance Spectra of a Nitroxide and Azobenzene-Containing Hydrogen-Bonded Complex,” A. V. Bogdanov,\* Y. Uchida, A. Kh. Vorobiev, *J. Phys. Chem. C*, American Chemical Society, **126**, 13332–13340 (2022).

**110)** “Hierarchical zeolites with high hydrothermal stability prepared via desilication of OSDA-occluded zeolites,” X. Li, J. A. Hernandez Gaitan, S. Kokuryo, T. Sumi, H. Kitamura, K. Miyake,\* Y. Uchida, N. Nishiyama, *Micropor. Mesopor. Mater.*, Elsevier, **344**, 112096 (2022).

**109)** “LDPE cracking over mono and divalent metals doped Beta zeolite,” S. Kokuryo,\* K. Tamura, K. Miyake,\* Y. Uchida, A. Mizusawa, T. Kubo, and N. Nishiyama, *Catal. Sci. Technol.*, The Royal Society of Chemistry, **12**, 4138–4144 (2022). **Inside Back Cover**

**108)** “Mechanochemical Synthesis of Dispersible Platinum Nanosheets for Enhanced Catalysis in Microreactor,” K. Sasaki, K. Miyake, Y. Uchida,\* N. Nishiyama, *ACS Appl. Nano Mater.*, American Chemical Society, **5**, 4998–5005 (2022).

**107)** “Molecular Clustering Behaviour in Cybotactic Nematic Phase of Spin-labelled Liquid Crystal,” Y. Uchida,\* T. Akita, K. Hanada, D. Kiyohara, N. Nishiyama, *J. Mater. Chem. C*, The Royal Society of Chemistry, **10**, 6621–6627 (2022). **Inside Front Cover**



**106)** “Design of Zr- and Al-doped \*BEA type zeolite to boost LDPE cracking,” S. Kokuryo,\* K. Miyake,\* Y. Uchida, S. Tanaka, M. Miyamoto, Y. Oumi, A. Mizusawa, T. Kubo, N. Nishiyama, *ACS Omega*, American Chemical Society, **7**, 12971–12977 (2022).

**105)** “A Novel Strategy to Enhance Acid Strength of Zeolites by Incorporating Ge into Zeolite Framework,” S. Kokuryo,\* H. Al Jabri, K. Miyake,\* Y. Uchida, S. Tanaka, M. Miyamoto, Y. Oumi, N. Nishiyama, *ChemistrySelect*, Wiley-VCH, **7**, e202200756 (2022).

**104)** “Zr-doped SAPO-34 with enhanced Lewis acidity,” S. Kokuryo,\* K. Tamura, K. Miyake,\* Y. Uchida, A. Mizusawa, T. Kubo, N. Nishiyama, *New. J. Chem.*, The Royal Society of Chemistry, **46**, 3838–3843 (2022).

**103)** “Electrochemical hydrogen evolution reaction over Co/P doped carbon derived from triethyl phosphite-deposited 2D nanosheets of Co/Al layered double hydroxides,” Y. Shu,\* K. Sasaki, Y. Fujimoto, K. Miyake,\* Y. Uchida, S. Tanaka, N. Nishiyama, *Int. J. Hydrog. Energy*, Elsevier, **49**, 10638–10645 (2022).

**102)** “Vapor-assisted crystallization of in situ glycine-modified UiO-66 with enhanced CO<sub>2</sub> adsorption,” Y. Fujimoto, Y. Shu, Y. Taniguchi, K. Miyake,\* Y. Uchida, S. Tanaka, N. Nishiyama, *New J. Chem.*, The Royal Society of Chemistry, **46**, 1779-1784 (2022).

**101)** “Defect engineering to boost catalytic activity of Beta zeolite on low-density polyethylene cracking,” S. Kokuryo\*, K. Miyake\*, Y. Uchida, A. Mizusawa, T. Kubo, N. Nishiyama, *Mater. Today Sustain.*, Elsevier, **17**, 100098 (2022).

**100)** “Precisely controlled synthesis of Co/N species contained porous carbon for oxygen reduction reaction via anion-exchanging and CO<sub>2</sub> activation,” Y. Shu,\* Y. Fujimoto, K. Miyake,\* Y. Uchida, S. Tanaka, N. Nishiyama, *New J. Chem.*, The Royal Society of Chemistry, **46**, 2038–2043 (2022). **Front Cover**

**99)** “Magnetically Manipulable Ionic Liquid Crystal Incorporating Neutral Radical Moiety,” Y. Uchida,\* T. Sakaguchi, S. Oki, S. Shimono, J. Park, M. Sugiyama, S. Sato, E. Zaytseva, D. G. Mazhukin, R. Tamura,\* *ChemPlusChem*, Wiley, **87**, e202100352 (2022). **Front Cover**

**98)** “Self-assembly strategy for Co/N-doped meso/microporous carbon toward superior oxygen reduction catalysts,” Y. Shu,\* K. Ota, Koji Miyake,\* Y. Uchida, S. Tanaka, N. Nishiyama, *Colloids Surf. A*, Elsevier, **629**, 127395 (2021).

**97)** “SAPO-34 Zeolite Nanocrystals Coated with ZrO<sub>2</sub> as Catalysts for Methanol-to-Olefin Conversion,” Y. Fujimoto, Y. Shu, K. Miyake,\* Y. Uchida, N. Nishiyama, *ACS Appl. Nano Mater.*, American Chemical Society, **4**, 8321–8327 (2021).

**96)** “Stable dehydroaromatization of ethane over Zn ion exchanged MFI type galloaluminosilicate zeolite,” R. Inoue, K. Miyake,\* Y. Hotta, X. Li, R. Yashiro, Y. Hirota, Y. Uchida, M. Miyamoto, Y. Oumi, C. Y. Kong, N. Nishiyama, *Fuel*, Elsevier, **305**, 121487 (2021).

**95)** “Thin ZIF-8 Nanosheets Synthesized in Hydrophilic TRAPs,” K. Sasaki, T. Okue, Y. Shu, K. Miyake, Y. Uchida,\* N. Nishiyama, *Dalton Trans.*, The Royal Society of Chemistry, **50**, 10394–10399 (2021). **Outside Back Cover**

- 94)** “Lateral Growth of Uniformly Thin Gold Nanosheets Facilitated by Two-dimensional Precursor Supply,” K. Sasaki, T. Okue, T. Nakai, Y. Uchida,\* N. Nishiyama, *Langmuir*, American Chemical Society, **37**, 5872–5877 (2021). **Supplementary Cover**
- 93)** “Single atomic Co coordinated with N in microporous carbon for oxygen reduction reaction obtained from Co/2-methylimidazole anchored to Y zeolite as a template,” Y. Zhu, K. Miyake,\* Y. Shu, K. Moroto, Y. Hirota, Y. Uchida, S. Tanaka, T. Zheng, M. Katayama, Y. Inada, E. Morallón, D. Cazorla-Amorós, C. Y. Kong, N. Nishiyama, *Mater. Today Chem.*, Elsevier, **20**, 100410 (2021).
- 92)** “Hysteretic Control of Near-infrared Transparency Using a Liquescent Radical Cation,” S. Suzuki,\* D. Yamaguchi, Y. Uchida, T. Naota,\* *Angew. Chem. Int. Ed.*, Wiley-VCH, **60**, 8284–8288 (2021).
- 91)** “Controlled Release of Photoresponsive Nematic Liquid Crystalline Microcapsules,” Y. Iwai, T. Maeda, Y. Uchida,\* F. Araoka, N. Nishiyama, *Adv. Photon. Res.*, Wiley-VCH, **2**, 2000079 (2021). **Inside Front Cover**
- 90)** “Thermal Molecular Motion Can Amplify Intermolecular Magnetic Interactions,” Y. Uchida,\* G. Watanabe, T. Akita, N. Nishiyama, *J. Phys. Chem. B*, American Chemical Society, **124**, 6175–6180 (2020).
- 89)** “Shrinkage of Cholesteric Liquid Crystalline Microcapsule as Omnidirectional Cavity to Suppress Optical Loss,” Y. Iwai, R. Iijima, K. Yamamoto, T. Akita, Y. Uchida,\* N. Nishiyama, *Adv. Opt. Mater.*, Wiley-VCH, **8**, 1901363 (2020).
- 88)** “Rational design of single atomic Co in CoN<sub>x</sub> moieties on graphene matrix as an ultra-highly efficient active site for oxygen reduction reaction,” Y. Shu, K. Miyake, J. Quilez-Bermejo, Y. Zhu, Y. Hirota, Y. Uchida, S. Tanaka, E. Morallón, D. Cazorla-Amorós, C. Y. Kong, N. Nishiyama, *ChemNanoMat*, Wiley-VCH, **6**, 218-222 (2020).
- 87)** “Synthesis of titanium silicalite-1 (TS-1) zeolite with high content of Ti by a dry gel conversion method using amorphous TiO<sub>2</sub>-SiO<sub>2</sub> composite with highly-dispersed Ti species,” C. N. Soekiman, Y. Zhu, K. Miyake, M. Ota, Y. Hirota, Y. Uchida, N. Nishiyama, *Mater. Today Chem.*, Elsevier, **16**, 100209 (2020).
- 86)** “Dry Gel Conversion Synthesis of Cu/SSZ-13 as a Catalyst with High Performance for NH<sub>3</sub>-SCR,” H. Al Jabri, K. Miyake, K. Ono, M. Nakai, R. Inoue, Y. Hirota, Y. Uchida, T. Yokoi, T. Ohnishi, M. Ogura, N. Nishiyama, *Micropor. Mesopor. Mater.*, Elsevier, **297**, 109780 (2020).
- 85)** “Dehydrogenative Coupling of Toluene Promoted by Multi-Walled Carbon Nanotubes,” S. I. El-Hout, Y. Zhou, J. Kano, Y. Uchida, Y. Nishina, *Catal. Lett.*, Springer, **150**, 256-262 (2020).
- 84)** “Dehydrogenation of propane over high silica \*BEA type gallosilicate (Ga-Beta),” M. Nakai, K. Miyake, R. Inoue, K. Ono, H. Al Jabri, Y. Hirota, Y. Uchida, S. Tanaka, M. Miyamoto, Y. Oumi, C. Y. Kong, N. Nishiyama, *Catal. Sci. Technol.*, The Royal Society of Chemistry, **9**, 6234-6239 (2019).
- 83)** “Magnetically controllable random laser in ferromagnetic nematic liquid crystals,” T. Naruta, T. Akita, Y. Uchida,\* D. Lisjak, A. Mertelj, N. Nishiyama, *Opt. Express*, Optical Society of America, **27**, 24426-24433 (2019).
- 82)** “Supramolecular Polymerization in Liquid Crystalline Media: Toward Modular Synthesis of Multifunctional Core–Shell Columnar Liquid Crystals,” K. Yano, T. Hanebuchi, X.-J. Zhang, Y. Itoh, Y.

Uchida, T. Sato, K. Matsuura, F. Kagawa, F. Araoka, T. Aida, *J. Am. Chem. Soc.*, American Chemical Society, **141**, 10033-10038 (2019).

**81)** “Strategy for Stimuli-Induced Spin Control Using a Liquescent Radical Cation,” S. Suzuki, R. Maya, Y. Uchida, T. Naota, *ACS Omega*, American Chemical Society, **4**, 10031-10035 (2019).

**80)** “Improving hydrothermal stability of acid sites in MFI type aluminosilicate zeolite (ZSM-5) by coating MFI type all silica zeolite (silicalite-1) shell layer,” K. Miyake, R. Inoue, T. Miura, M. Nakai, H. Al-Jabri, Y. Hirota, Y. Uchida, S. Tanaka, M. Miyamoto, S. Inagaki, Y. Kubota, C. Y. Kong, N. Nishiyama, *Micropor. Mesopor. Mater.*, Elsevier, **288**, 109523 (2019).

**79)** “Photomagnetic effects in metal-free liquid crystals,” T. Akita, Y. Sugiyama, T. Yamazaki, S. Nakagami, D. Kiyohara, Y. Uchida,\* N. Nishiyama, *Commun. Chem.*, Springer Nature, **2**, 64 (2019).

**78)** “Anchoring Co/2-methylimidazole complex on ion exchange resin and its transformation to Co/N doped carbon as an electrocatalyst for ORR,” Y. Zhu, K. Miyake, Y. Shu, A. Gabe, Y. Hirota, Y. Uchida, S. Tanaka, E. Morallón, D. Cazorla-Amorós, N. Nishiyama, *Catal. Sci. Technol.*, The Royal Society of Chemistry, **9**, 578-582 (2019).

**77)** “Synthesis of High Silica SSZ-13 in Fluoride-Free Media by Dry Gel Conversion Method,” H. Al Jabri, K. Miyake,\* K. Ono, M. Nakai, Y. Hirota, Y. Uchida, M. Miyamoto, N. Nishiyama, *Micropor. Mesopor. Mater.*, **278**, 322-326 (2019).

**76)** “Fabrication of Co/P25 coated with thin Nitrogen-doped carbon shells (Co/P25/NC) as an efficient electrocatalyst for Oxygen Reduction Reaction (ORR),” K. Miyake, T. Takemura, A. Gabe, Y. Zhu, M. Ota, Y. Shu, Y. Hirota, Y. Uchida, S. Tanaka, M. Katayama, Y. Inada, E. Morallón, D. Cazorla-Amorós, N. Nishiyama, *Electrochim. Acta*, Elsevier, **296**, 867-873 (2019).

**75)** “Solvent/OSDA-free transformation of unseeded aluminosilicate into various zeolites via mechanochemical and vapor treatments,” C. N. Soekiman, K. Miyake, Y. Hirota, Y. Uchida, S. Tanaka, M. Miyamoto, N. Nishiyama, *Micropor. Mesopor. Mater.*, Elsevier, **273**, 273-275 (2019).

**74)** “Synthesis of high silica \*BEA type ferrisilicate (Fe-Beta) by dry gel conversion method using dealuminated zeolites and its catalytic performance on acetone to olefins (ATO) reaction,” M. Nakai, K. Miyake,\* K. Ono, H. A. Jabri, Y. Hirota, Y. Uchida, N. Nishiyama, *Micropor. Mesopor. Mater.*, Elsevier, **273**, 189-195 (2019).

**73)** “Unique Superparamagnetic-like Behavior Observed in Non- $\pi$ -delocalized Nitroxide Diradical Compounds Showing Discotic Liquid Crystalline Phase,” Y. Takemoto, E. Zaytseva, K. Suzuki, N. Yoshioka, Y. Takanishi, M. Funahashi, Y. Uchida, T. Akita, J. Park, S. Sato, S. Clevers, G. Coquerel, D. G. Mazhukin, S. Shimono, M. Sugiyama, H. Takahashi, J. Yamauchi, R. Tamura, *Chem. Eur. J.*, Wiley-VCH, **24**, 17293-17302 (2018). **Hot Paper**

**72)** “Measuring Magnetically-Tuned Ferroelectric Polarization in Liquid Crystals,” H. Ueda, T. Akita, Y. Uchida, T. Kimura, *J. Vis. Exp.*, Journal of Visualized Experiments, **138**, e58018, (2018).

**71)** “Nanosheet Synthesis of Metal Organic Frameworks in a Sandwich-Like Reaction Field for Enhanced Gate-Opening Pressures,” T. Omiya, K. Sasaki, Y. Uchida, N. Nishiyama, *ACS Appl. Nano Mater.*, American Chemical Society, **1**, 3779-3784 (2018).

- 70) "Helicity Control of Supramolecular Gel Fiber Consisting of Achiral Ni(II) Complex in Chiral Nematic Solvent," T. Maeda, Y. Kuwajima, T. Akita, Y. Iwai, N. Komiya, Y. Uchida,\* T. Naota,\* *Chem. Eur. J.*, Wiley-VCH, **24**, 12546-12554 (2018). **Cover Feature**
- 69) "CO<sub>2</sub> adsorption property of amine-modified amorphous TiO<sub>2</sub> nanoparticles with a high surface area," M. Ota, Y. Hirota, Y. Uchida, N. Nishiyama, *Colloids Interfaces*, MDPI Publishing, **2**, 25 (2018).
- 68) "Molecular Mobility Effect on Magnetic Interactions in All-Organic Paramagnetic Liquid Crystal with Nitroxide Radical as a Hydrogen-Bonding Acceptor," S. Nakagami, T. Akita, D. Kiyohara, Y. Uchida,\* R. Tamura, N. Nishiyama, *J. Phys. Chem. B*, American Chemical Society, **122**, 7409–7415 (2018).
- 67) "Solvent-free synthesis and KOH activation of mesoporous carbons using resorcinol/Pluronic F127/hexamethylenetetramine mixture and their application to EDLC," N. Yoshida, Y. Hirota, Y. Uchida, T. Asada, N. Kobayashi, N. Nishiyama, *Micropor. Mesopor. Mater.*, Elsevier, **272**, 217-221 (2018).
- 66) "Fabrication of Pt nanoparticles encapsulated in single crystal like silicalite-1 zeolite as a catalyst for shape-selective hydrogenation of C<sub>6</sub> olefins," K. Miyake, R. Inoue, M. Nakai, Y. Hirota, Y. Uchida, S. Tanaka, M. Miyamoto, N. Nishiyama, *Micropor. Mesopor. Mater.*, Elsevier, **271**, 156-159 (2018).
- 65) "Low Temperature Synthesized H<sub>2</sub>Ti<sub>3</sub>O<sub>7</sub> Nanotubes with a High CO<sub>2</sub> Adsorption Property by Amine Modification," M. Ota, Y. Hirota, Y. Uchida, Y. Sakamoto, N. Nishiyama, *Langmuir*, American Chemical Society, **34**, 6814-6819 (2018).
- 64) "Room-temperature magnetoelectric effect in a chiral smectic liquid crystal," H. Ueda,\* T. Akita, Y. Uchida, T. Kimura, *Appl. Phys. Lett.*, American Institute of Physics, **111**, 262901 (2017).
- 63) "Large negative magneto-LC effects induced by racemic dimerization of liquid crystalline nitroxide radicals with terminal cyano group," T. Akita, D. Kiyohara, T. Yamazaki, Y. Uchida,\* N. Nishiyama, *J. Mater. Chem. C*, The Royal Society of Chemistry, **5**, 12457-12465 (2017).
- 62) "Solvent- and OSDA-Free Synthesis of ZSM-5 Assisted by Mechanochemical and Vapor Treatments," K. Miyake, K. Ono, M. Nakai, Y. Hirota, Y. Uchida, S. Tanaka, M. Miyamoto, N. Nishiyama, *ChemistrySelect*, Wiley-VCH, **2**, 7651–7653 (2017).
- 61) "Preparation of robust metal-free magnetic nanoemulsions encapsulating low-molecular-weight nitroxide radicals and hydrophobic drugs directed toward MRI-visible targeted delivery," K. Nagura, Y. Takemoto, S. Moronaga, Y. Uchida, S. Shimono, A. Shiino, K. Tanigaki, T. Amano, F. Yoshino, Y. Noda, S. Koizumi, N. Komatsu, T. Kato, J. Yamauchi, R. Tamura, *Chem. Eur. J.*, Wiley-VCH, **23**, 15713–15720 (2017).
- 60) "Development of AEI type germanoaluminophosphate (GeAPO-18) with ultra-weak acid sites and its catalytic properties on methanol to olefins (MTO) reaction," K. Ono, K. Miyake, M. Nakai, H. A. Jabri, Y. Hirota, Y. Uchida, S. Tanaka, M. Miyamoto, N. Nishiyama, *Catal. Sci. Tech.*, The Royal Society of Chemistry, **7**, 4622-4628 (2017). **Front Cover**
- 59) "Fabrication of TiO<sub>2</sub>-graphene photocatalyst by direct chemical vapor deposition and its anti-fouling property," M. A. Fitri, M. Ota, Y. Hirota, Y. Uchida, K. Hara, D. Ino, N. Nishiyama, *Mater. Chem. Phys.*, Elsevier, **198**, 42-48 (2017).

- 58) "Real-time observation of hydrogen peroxide transport through oil phase in a W/O/W double emulsion with chemiluminescence emission," H. Kouno, Y. Iwai, Y. Uchida,\* Y. Hirota, N. Nishiyama, *Langmuir*, American Chemical Society, **33**, 3802-3808 (2017).
- 57) "Synthesis of MFI type ferrisilicate zeolite (Fe-MFI) nanocrystals by Dry Gel Conversion (DGC) method and its application to Methanol to Olefins (MTO) reactions," K. Miyake, Y. Hirota, K. Ono, Y. Uchida, M. Miyamoto, N. Nishiyama, *New J. Chem.*, The Royal Society of Chemistry, **41**, 2235-2240 (2017). **Front Cover**
- 56) "Room-Temperature Fabrication of Mono-dispersed Liquid Crystalline Shells with High Viscosity and High Melting Point," T. Akita, H. Kouno, Y. Iwai, Y. Uchida,\* N. Nishiyama, *J. Mater. Chem. C*, The Royal Society of Chemistry, **5**, 1303-1307 (2017). **Front Cover**
- 55) "3D Lattice Structure Control of Ordered Macroporous Material by Self-Assembly of Liquid Droplets," Y. Iwai, Y. Uchida,\* H. Yabu, N. Nishiyama, *Macromol. Rapid Commun.*, WILEY-VCH, **38**, 1600502 (2017). **Back Cover**
- 54) "Self-Assembled Magnetic Control Lever Embedded in Photonic Liquid Crystalline Microcapsule," Y. Iwai, Y. Uchida,\* N. Nishiyama, *Adv. Opt. Mater.*, WILEY-VCH, **4**, 1961-1964 (2016).
- 53) "Synthesis of Amorphous TiO<sub>2</sub> Nanoparticles with a High Surface Area and Their Transformation to Li<sub>4</sub>Ti<sub>5</sub>O<sub>12</sub> Nanoparticles," M. Ota, B. Dwijaya, Y. Hirota, Y. Uchida, S. Tanaka, N. Nishiyama, *Chem. Lett.*, The Chemical Society of Japan, **45**, 1285-1287 (2016).
- 52) "Direct and Selective Conversion of Methanol to para-Xylene over Zn ion doped ZSM-5/Silicalite-1 Core-Shell Zeolite Catalyst," K. Miyake, Y. Hirota, K. Ono, Y. Uchida, S. Tanaka, N. Nishiyama, *J. Catal.*, Elsevier, **342**, 63-66 (2016).
- 51) "Synthesis of mesoporous MFI zeolite using PVA as a secondary template," K. Miyake, Y. Hirota, Y. Uchida, N. Nishiyama, *J. Porous Mater.*, Springer, **23**, 1395-1399 (2016).
- 50) "FDTD Analysis of Light Propagation in Cholesteric Liquid Crystalline Droplet Array," K. Yamamoto, Y. Iwai, Y. Uchida,\* N. Nishiyama, *Jpn. J. Appl. Phys.*, The Japan Society of Applied Physics, **55**, 082001 (2016).
- 49) "Synthesis of SAPO-18 with low acidic strength and its application in conversion of dimethylether to olefins," Y. Hirota, M. Yamada, Y. Uchida, Y. Sakamoto, T. Yokoi, N. Nishiyama, *Micropor. Mesopor. Mater.*, Elsevier, **232**, 65-69 (2016).
- 48) "The Effects of Linking Group on Liquid Crystallinity of Nitroxide Radical Compounds," T. Akita, Y. Uchida,\* N. Nishiyama, *Chem. Lett.*, The Chemical Society of Japan, **45**, 910-912 (2016).
- 47) "A Kinetic/Thermodynamic Origin of Regular Chiral Fluctuation or Symmetry Breaking Unique to Preferential Enrichment," Y. Uchida, S. Iwama, G. Coquerel, R. Tamura,\* *Chem. Eur. J.*, John Wiley & Sons, **22**, 11660-11666 (2016).
- 46) "Selective Production of Benzene, Toluene and *p*-Xylene (BTpX) from Various C<sub>1-3</sub> Feedstocks over ZSM-5/Silicalite-1 Core-Shell Zeolite Catalyst," K. Miyake, Y. Hirota, K. Ono, Y. Uchida, N. Nishiyama, *ChemistrySelect*, Wiley-VCH, **5**, 967-969 (2016).

- 45) "Chiral All-Organic Nitroxide Biradical Liquid Crystal Showing Remarkably Large Positive Magneto-LC Effects," K. Suzuki, Y. Takemoto, S. Takaoka, K. Taguchi, Y. Uchida, D. G. Mazhukin, I. A. Grigor'ev, R. Tamura, *Chem. Commun.*, The Royal Society of Chemistry, **52**, 3935-3938 (2016).
- 44) "Nanosheet Formation in Hyperswollen Lyotropic Lamellar Phases," Y. Uchida,\* T. Nishizawa, T. Omiya, Y. Hirota, N. Nishiyama, *J. Am. Chem. Soc.*, American Chemical Society, **138**, 1103-1105 (2016).
- 43) "Porous structure and pore size control of mesoporous carbons using a combination of a soft-templating method and a solvent evaporation technique," T. Mitome, Y. Hirota, Y. Uchida, N. Nishiyama, *Colloids Surf. A*, Elsevier, **494**, 180-185 (2016).
- 42) "Synthesis of mesoporous MFI zeolite by dry gel conversion with ZnO particles and the catalytic activity on TMB cracking," K. Miyake, M. Yamada, Y. Sugiura, Y. Hirota, Y. Uchida, N. Nishiyama, *J. Porous Mater.*, Springer, **23**, 311-316 (2016).
- 41) "Size Control of ZnO Tetrapod in Gas-phase Synthesis using Flow Restrictor," Y. Uchida,\* K. Sakai, K. Yamamoto, N. Nishiyama, *Chem. Lett.*, The Chemical Society of Japan, **44**, 1188-1190 (2015).
- 40) "Preparation, characterization and magnetic behavior of a spin-labelled physical hydrogel containing a chiral cyclic nitroxide radical unit fixed inside the gelator molecule," Y. Takemoto, T. Yamamoto, N. Ikuma, Y. Uchida, K. Suzuki, S. Shimono, H. Takahashi, N. Sato, Y. Oba, R. Inoue, M. Sugiyama, H. Tsue, T. Kato, J. Yamauchi, R. Tamura,\* *Soft Matter*, The Royal Society of Chemistry, **11**, 5563-5570 (2015).
- 39) "Facile Synthesis of Nanoporous Carbons with High Surface Area and Their CO<sub>2</sub> Adsorption Properties," T. Mitome, Y. Uchida, N. Nishiyama, *Chem. Lett.*, The Chemical Society of Japan, **44**, 1004-1006 (2015).
- 38) "Ion Conductive Properties in Ionic Liquid Crystal Confined in Porous Membrane," Y. Uchida,\* T. Matsumoto, T. Akita, N. Nishiyama, *J. Mater. Chem. C*, The Royal Society of Chemistry, **3**, 6144-6147 (2015). **Back Cover**
- 37) "Synthesis of a Silicalite-1-coated Titanium Silicalite-1 (TS-1) Zeolite and Its Catalytic Activity in Liquid-phase Oxidation," Y. Sugiura, Y. Hirota, Y. Uchida, N. Nishiyama, *Chem. Lett.*, The Chemical Society of Japan, **44**, 477-479 (2015).
- 36) "Ferrofluids Based on Paramagnetic Nitroxide Radical Liquid Crystal," T. Akita, Y. Uchida,\* S. Nakagami, D. Kiyohara, N. Nishiyama, *Crystals*, MDPI Publishing, **5**, 206-214 (2015).
- 35) "Vapor infiltration synthesis of nitrogen-containing ordered mesoporous carbon films and the electrochemical properties," T. Mitome, Y. Uchida, N. Nishiyama, *J. Chem. Eng. Jpn.*, The Society of Chemical Engineers, Japan, **48**, 245-251 (2015).
- 34) "Magnetically Transportable Core-Shell Emulsion Droplets with Antioxidative All-Organic Paramagnetic Liquid Shell," Y. Uchida,\* Y. Iwai, T. Akita, T. Mitome, K. Suzuki, R. Tamura, N. Nishiyama, *J. Mater. Chem. B*, The Royal Society of Chemistry, **2**, 4130-4133 (2014).
- 33) "Synthesis of mesoporous carbons using triblock copolymer containing sulfonic acid group and their capacitance property," T. Mitome, Y. Iwai, Y. Uchida, Y. Egashira, M. Matsuura, K. Maekawa, N. Nishiyama, *J. Mater. Chem. A*, The Royal Society of Chemistry, **2**, 10104-10108 (2014).

- 32)** “Chemiluminescence Emission in Cholesteric Liquid Crystalline Core-shell Microcapsules,” Y. Iwai, H. Kaji, Y. Uchida,\* N. Nishiyama, *J. Mater. Chem. C*, The Royal Society of Chemistry, **2**, 4904-4908 (2014). **Front Cover**
- 31)** “Synthesis of ordered mesoporous carbon films with a 3D pore structure and the electrochemical performance of electrochemical double layer capacitors,” T. Mitome, Y. Uchida, Y. Egashira, N. Nishiyama, *Colloid Surface A*, Elsevier, **449**, 51-56 (2014).
- 30)** “Determination of structural characteristics of all-organic radical liquid crystals based on analysis of the dipole-dipole broadened EPR spectra,” A. Vorobiev, N. Chumakova, D. Pomogailo, Y. Uchida, K. Suzuki, Y. Noda, R. Tamura, *J. Phys. Chem. B*, American Chemical Society, **118**, 1932-1942 (2014).
- 29)** “Triblock Copolymer-controlled Crystallization of ZnO Nanorod-microspheres from Aqueous Solution,” Y. Hirota, M. S. Elias, B. Dwijaya, Y. Uchida, N. Nishiyama, *Chem. Lett.*, The Chemical Society of Japan, **43**, 360-362 (2014).
- 28)** “Controlled Fabrication and Photonic Structure of Cholesteric Liquid Crystalline Shells,” Y. Uchida,\* Y. Takanishi, J. Yamamoto, *Adv. Mater.*, Wiley-VCH, **25**, 3234-3237 (2013).
- 27)** “Pore Size Control of Microporous Carbon Membranes by Post-Synthesis Activation and Their Use in a Membrane Reactor for Dehydrogenation of Methylcyclohexane,” Y. Hirota,\* A. Ishikado, Y. Uchida, Y. Egashira, N. Nishiyama, *J. Membr. Sci.*, Elsevier, **440**, 134-139 (2013).
- 26)** “Influence of applied electric fields on the positive magneto-LC effects observed in the ferroelectric liquid crystalline phase of a chiral nitroxide radical compound,” K. Suzuki, Y. Uchida, R. Tamura,\* Y. Noda, N. Ikuma, S. Shimono, J. Yamauchi, *Soft Matter*, The Royal Society of Chemistry, **9**, 4687-4692 (2013).
- 25)** “Synthesis of mesoporous ZnO, AZO, and BZO transparent conducting films using nonionic triblock copolymer as template,” N. Ueno, B. Dwijaya, Y. Uchida, Y. Egashira, N. Nishiyama\*, *Mater. Lett.*, Elsevier, **100**, 111-114 (2013).
- 24)** “Pretransitional Layer Contraction at the Chiral Smectic A-to-Chiral Smectic C Phase Transition of a Chiral Nitroxide Radical,” Y. Uchida,\* K. Suzuki, R. Tamura, Y. Aoki, H. Nohira, *J. Phys. Chem. B*, American Chemical Society, **117**, 3054-3060 (2013).
- 23)** “Adsorption of indole on KOH-activated mesoporous carbon,” T. Mitome, Y. Uchida, Y. Egashira, K. Hayashi, A. Nishiura, N. Nishiyama, *Colloid Surface A*, Elsevier, **424**, 89-95 (2013).
- 22)** “Magneto-LC Effects in Hydrogen-Bonded All-Organic Radical Liquid Crystal,” Y. Uchida,\* K. Suzuki, R. Tamura, *J. Phys. Chem. B.*, American Chemical Society, **116**, 9791-9795 (2012).
- 21)** “Low temperature hydrothermal synthesis of ZnO nanosheet using organic/inorganic composite as seed layer,” N. Ueno, A. Yamamoto, Y. Uchida, Y. Egashira, N. Nishiyama,\* *Mater. Lett.*, Elsevier, **86**, 65-68 (2012).
- 20)** “Coke deposition in the SAPO-34 membranes for examining the effects of zeolitic and non-zeolitic pathways on the permeation and separation properties in gas and vapor permeations,” Y. Hirota, K. Watanabe, Y. Uchida, Y. Egashira, K. Yoshida, Y. Sasaki, N. Nishiyama,\* *J. Membr. Sci.*, Elsevier, **415-416**, 176-180 (2012).

- 19) "Effect of Crystal Size on Acetone Conversion over SAPO-34 Crystals," Y. Hirota, Y. Nakano, K. Watanabe, Y. Uchida, M. Miyamoto, Y. Egashira, N. Nishiyama,\* *Catal. Lett.*, Springer, **142**, 464-468 (2012).
- 18) "Observation of positive and negative magneto-LC effects in all-organic nitroxide radical liquid crystals by EPR spectroscopy," K. Suzuki, Y. Uchida, R. Tamura,\* S. Shimono, J. Yamauchi, *J. Mater. Chem.*, The Royal Society of Chemistry, **22**, 6799-6806 (2012).
- 17) "Anisotropic and Inhomogeneous Magnetic Interactions Observed in All-Organic Nitroxide Radical Liquid Crystals," Y. Uchida,\* K. Suzuki, R. Tamura,\* N. Ikuma, S. Shimono, Y. Noda, J. Yamauchi, *J. Am. Chem. Soc.*, American Chemical Society, **132**, 9746-9752 (2010).
- 16) "Observation of the Preferential Enrichment Phenomenon for Essential  $\alpha$ -Amino Acids with a Racemic Crystal Structure," S. Iwama, M. Horiguchi, H. Sato, Y. Uchida, H. Takahashi, H. Tsue, R. Tamura,\* *Cryst. Growth Des.*, American Chemical Society, **10**, 2668-2675 (2010).
- 15) "Second Harmonic Generation in a Paramagnetic All-Organic Chiral Smectic Liquid Crystal," R. Kogo, F. Araoka, Y. Uchida, R. Tamura, K. Ishikawa, H. Takezoe,\* *Appl. Phys. Express*, The Japan Society of Applied Physics, **3**, 041701 (2010).
- 14) "Preparation and Ferroelectric Properties of New Chiral Liquid Crystalline Organic Radical Compounds," N. Ikuma, K. Suzuki, Y. Uchida, R. Tamura,\* Y. Aoki, H. Nohira, *Heterocycles*, The Japan Institute of Heterocyclic Chemistry, **80**, 527-535 (2010).
- 13) "Synthesis and Stereochemistry of Novel Rigid Nitroxide Biradicals Based on Paramagnetic Pyrrolidine Core," K. Suzuki, D. G. Mazhukin, H. Takahashi, Y. Uchida, R. Tamura,\* I. A. Grigor'ev, *Heterocycles*, The Japan Institute of Heterocyclic Chemistry, **78**, 3091-3099 (2009).
- 12) "Electric, Electrochemical and magnetic properties of novel ionic liquid nitroxides, and their use as an EPR spin Probe," Y. Uchida, S. Oki, R. Tamura,\* T. Sakaguchi, K. Suzuki, K. Ishibashi, J. Yamauchi, *J. Mater. Chem.*, The Royal Society of Chemistry, **19**, 6877-6881 (2009).
- 11) "Magnetic-field-induced molecular alignment in an achiral liquid crystal spin-labeled by a nitroxyl group in the mesogen core," Y. Uchida, R. Tamura,\* N. Ikuma, S. Shimono, J. Yamauchi, Y. Shimbo, H. Takezoe, Y. Aoki, H. Nohira, *J. Mater. Chem.*, The Royal Society of Chemistry, **19**, 415-418 (2009).
- 10) "Enantiomeric resolution of racemic  $C_2$ -symmetric *trans*-2,5-dimethyl-2,5-diphenylpyrrolidine and *trans*-2,5-dimethyl-2,5-bis(3-hydroxyphenyl)pyrrolidine by a diastereomer method," Y. Uchida, Y. Nakayama, K. Suzuki, S. Oki, M. Horiguchi, H. Tsue, R. Tamura,\* *Heterocycles*, The Japan Institute of Heterocyclic Chemistry, **76**, 875-881 (2008).
- 9) "Unusual intermolecular magnetic interaction observed in an all-organic radical liquid crystal," Y. Uchida, N. Ikuma, R. Tamura,\* S. Shimono, Y. Noda, J. Yamauchi, Y. Aoki, H. Nohira, *J. Mater. Chem.*, The Royal Society of Chemistry, **18**, 2950-2952 (2008).
- 8) "Partial Resolution of Racemic *trans*-4-[5-(4-Alkoxyphenyl)-2,5-dimethylpyrrolidine-1-oxyl-2-yl] benzoic Acids by the Diastereomer Method with (*R*) or (*S*)-1-Phenylethylamine," Y. Uchida, T. Uematsu, Y. Nakayama, H. Takahashi, H. Tsue, K. Tanaka, R. Tamura,\* *Chirality*, Wiley-Liss, **20**, 282-287 (2008).



- 7) “EPR Investigations on Molecular Orientation of Paramagnetic Liquid Crystals in a Surface-Stabilized Liquid Crystal Cell: Studies on a Smectic C or Chiral Smectic C Phase,” Y. Noda, S. Shimono, M. Baba, J. Yamauchi, Y. Uchida, N. Ikuma, R. Tamura,\* *Appl. Magn. Reson.*, Springer-Verlag, **33**, 251-267 (2008).
- 6) “EPR Study of Single Crystals of PROXYLs,” Y. Noda, S. Shimono, M. Baba, J. Yamauchi, Y. Uchida, N. Ikuma, R. Tamura,\* *Appl. Magn. Reson.*, Springer-Verlag, **33**, 85-93 (2008).
- 5) “Magnetic characteristics and orientation of a new nitroxide radical in an ordered matrix,” N. A. Chumakova,\* A. K. Vorobiev, N. Ikuma, Y. Uchida, R. Tamura, *Mendeleev Commun.*, Elsevier, **18**, 21-23 (2008).
- 4) “Synthesis, crystal structure, and magnetic properties of 4-(2-methyl-1-azaspiro[4.5]deca-1-oxyl-2-yl) phenol,” Y. Uchida, N. Matsuoka, H. Takahashi, S. Shimono, N. Ikuma, R. Tamura,\* *Heterocycles*, The Japan Institute of Heterocyclic Chemistry, **74**, 607-616 (2007).
- 3) “Antiferromagnetic interaction arising from a close contact between nitroxyl oxygen and  $\alpha$ -methyl carbon atoms carrying an  $\alpha$ -spin in the solid state,” Y. Uchida, R. Tamura,\* N. Ikuma, K. Masaki, H. Takahashi, S. Shimono, J. Yamauchi, *Mendeleev Commun.*, the Academy of Sciences of the USSR and the Royal Society of Chemistry, **16**, 69-71 (2006).
- 2) “Ferroelectric Properties of Paramagnetic, All-Organic, Chiral Nitroxyl Radical Liquid Crystals,” N. Ikuma, R. Tamura,\* S. Shimono, Y. Uchida, K. Masaki, J. Yamauchi, Y. Aoki, H. Nohira, *Adv. Mater.*, Wiley-VCH, **18**, 477-480 (2006).
- 1) “Spontaneous Racemization and Epimerization Behavior in Solution of Chiral Nitroxides,” N. Ikuma, H. Tsue, N. Tsue, S. Shimono, Y. Uchida, K. Masaki, N. Matsuoka, R. Tamura,\* *Org. Lett.*, American Chemical Society, **7**, 1797-1800 (2005).

### Conference proceedings

- 18) “Three-dimensionally printed microwell for observing single liquid crystalline shell,” Y. Uchida,\* M. Iwakura, N. Nishiyama, *Proc. SPIE*, SPIE Press, **12907**, 1290707 (2024).
- 17) “Chiral Nitroxide Radical with Terminal Trifluoromethoxy Group,” Y. Uchida,\* T. Akita, N. Nishiyama, *Liq. Cryst.*, Taylor and Francis, **50**, 1292–1294 (2023).
- 16) “Synthesis of Cu<sub>2</sub>O nanourchins from Cu nanosheets synthesized in hydrophilic bilayers of hyperswollen lamellar phase,” K. Sasaki, K. Miyake, Y. Uchida,\* N. Nishiyama, *Liq. Cryst.*, Taylor & Francis, **50**, 1287–1291 (2023).
- 15) “Synthesis of MOF Nanosheets in Hyperswollen Lyotropic Lamellar Phase,” T. Omiya, K. Sasaki, Y. Uchida,\* N. Nishiyama, *Mol. Cryst. Liq. Cryst.*, Taylor & Francis, **684**, 1-6 (2019).
- 14) “Preparation and Magnetic Properties of Nitroxide Radical Liquid Crystalline Physical Gels,” Y. Takemoto, Y. Uchida, S. Shimono, J. Yamauchi, R. Tamura,\* *Mol. Cryst. Liq. Cryst.*, Taylor & Francis, **647**, 279-289 (2017).
- 13) “Magnetic Properties of Terminal Iodinated Nitroxide Radical Liquid Crystals,” T. Akita, T. Yamazaki, Y. Uchida,\* N. Nishiyama, *Polyhedron*, Elsevier, **136**, 79-86 (2017). **Front Cover**

- 12) “Paramagnetic Nitroxide Radical Liquid Crystalline Compounds with Methyl di(ethylene glycol) Chain,” T. Akita, Y. Uchida,\* D. Kiyohara, S. Nakagami, N. Nishiyama, *Ferroelectrics*, Taylor & Francis, **495**, 97–104 (2016).
- 11) “Synthesis and Characterization of a New Series of Paramagnetic Ferroelectric Liquid Crystalline Nitroxide Radicals,” Y. Uchida,\* R. Tamura, K. Suzuki, Y. Aoki, H. Nohira, *Mol. Cryst. Liq. Cryst.*, Taylor & Francis, **615**, 89-106 (2015).
- 10) “Temperature-dependent Color Change of Cholesteric Liquid Crystalline Core-shell Microspheres,” Y. Iwai, H. Kaji, Y. Uchida,\* N. Nishiyama, *Mol. Cryst. Liq. Cryst.*, Taylor & Francis, **615**, 9-13 (2015).
- 9) “Terminal Fluorinated Nitroxide Radical Liquid Crystalline Compounds,” T. Akita, Y. Uchida,\* N. Nishiyama, *Mol. Cryst. Liq. Cryst.*, Taylor & Francis, **613**, 174-180 (2015).
- 8) “Effects of Photonic Band Gap of Cholesteric Liquid Crystal on Chemiluminescence,” Y. Iwai, H. Kouno, Y. Uchida,\* N. Nishiyama, *Mol. Cryst. Liq. Cryst.*, Taylor & Francis, **613**, 163-166 (2015).
- 7) “Size Control of Cholesteric Liquid Crystalline Microcapsules,” Y. Uchida,\* Y. Iwai, T. Akita, K. Yamamoto, N. Nishiyama, *Mol. Cryst. Liq. Cryst.*, Taylor & Francis, **613**, 82-87 (2015).
- 6) “Electric Field Dependence of Molecular Orientation and Anisotropic Magnetic Interactions in the Ferroelectric Liquid Crystalline Phase of an Organic Radical Compound by EPR Spectroscopy,” K. Suzuki,\* Y. Uchida, R. Tamura, Y. Noda, N. Ikuma, S. Shimono, J. Yamauchi, *Adv. Sci. Tech.*, Trans Tech Publications, **82**, 50-54 (2013).
- 5) “Preparation and Properties of  $C_2$ -Symmetric Organic Radical Compounds Showing Ferroelectric Liquid Crystal Properties,” N. Ikuma, Y. Uchida, R. Tamura,\* K. Suzuki, J. Yamauchi, Y. Aoki, H. Nohira, *Mol. Cryst. Liq. Cryst.*, Taylor & Francis, **509**, 850-859 (2009).
- 4) “Origin of the Difference in Phase Transition Behavior between Two Type of All-Organic Radical Liquid Crystals,” Y. Uchida, R. Tamura,\* N. Ikuma, S. Shimono, H. Takahashi, J. Yamauchi, *Adv. Sci. Tech.*, Trans Tech Publications, **55**, 42-45 (2008).
- 3) “Synthesis and Characterization of Novel Radical Liquid Crystals Showing Ferroelectricity,” Y. Uchida, R. Tamura,\* N. Ikuma, J. Yamauchi, Y. Aoki, H. Nohira, *Ferroelectrics*, Gordon and Breach Science Pub., **365**, 158-169 (2008).
- 2) “Synthesis and Characterization of Novel All-Organic Liquid Crystalline Radicals,” Y. Uchida, R. Tamura,\* N. Ikuma, S. Shimono, J. Yamauchi, Y. Aoki, H. Nohira, *Mol. Cryst. Liq. Cryst.*, Taylor & Francis, **479**, 213-221 (2007).
- 1) “Paramagnetic FLCs Containing an Organic Radical Component,” N. Ikuma, R. Tamura,\* K. Masaki, Y. Uchida, S. Shimono, J. Yamauchi, Y. Aoki, H. Nohira, *Ferroelectrics*, Gordon and Breach Science Pub., **343**, 119-125 (2006).

## Books

- 9) R. Tamura, Y. Uchida, K. Nagura, “Nitroxides in Liquid Crystals,” in *Nitroxides*, eds. O. Ouari, G. Gignès, The Royal Society of Chemistry, Cambridge, Chapter 11, pp.420-448, 2021.
- 8) 内田幸明, 「液晶の自己組織化と液晶の配向場における材料の自己組織化」, 自己修復材料、自己組織化、形状記憶材料の開発と応用事例, 技術情報協会, 2020年, 276-285頁.

- 7) Y. Uchida, T. Narushima, J. Yuasa, “Molecular Technology for Chirality Control: From Structure to Circular Polarization,” in *Molecular Technology: Energy Innovation*, eds. H. Yamamoto, T. Kato, John Wiley & Sons, New York, chap.6, 2018, pp. 129-154.
- 6) R. Tamura, Y. Uchida, K. Suzuki, “Observation of Magnetoelectric Effect in All-Organic Ferromagnetic and Ferroelectric Liquid Crystals in an Applied Magnetic Field,” in *Advances in Organic Crystal Chemistry: Comprehensive Review 2015*, eds. R. Tamura, M. Miyata, Springer Japan, Tokyo, chap. 35, 2015, pp. 689-706.
- 5) R. Tamura, Y. Uchida, K. Suzuki, “Magnetic Properties of Organic Radical Liquid Crystals and Metallomesogens,” in *Handbook of Liquid Crystals*, eds. J. Goodby, P. J. Collings, T. Kato, C. Tschierske, H. Gleeson, P. Raynes, WILEY-VCH, Weinheim, chap. 28, 2014, pp. 1-28.
- 4) R. Tamura, K. Suzuki, Y. Uchida, Y. Noda, “EPR Characterization of Diamagnetic and Magnetic Organic Soft Materials Using Nitroxide Spin Probe Techniques,” in *Electron Paramagnetic Resonance*, Vol. 23, RSC Publishing, Cambridge, 2013, pp. 1–21.
- 3) R. Tamura, Y. Uchida, K. Suzuki, “Magnetic and Electric Properties of Organic Nitroxide Radical Liquid Crystals and Ionic Liquids” in *Nitroxides - Theory, Experiment and Applications*, ed. A. Kokorin, Open Access Publisher, Rijeka, chap.6, 2012, pp. 191-210.
- 2) R. Tamura, Y. Uchida, K. Suzuki, “Magnetic Liquid Crystals,” in *Liquid Crystals Beyond Displays: Chemistry, Physics, and Applications*, ed. Q. Li, John Wiley & Sons, New York, chap.3, 2012, pp. 83-110.
- 1) 田村類, 内田幸明, 鈴木克明, 「キラル有機ラジカル液晶の合成と磁気電気物性」, 液晶-構造制御と機能化の最前線- (加藤隆史監修) , シーエムシー出版, 2010年, 179-192頁.

## Reviews and commentaries

- 22) “これからの液晶の話,” 諏訪俊一,\* 内田幸明, T-pop News, 218 (2023).
- 21) “Bottom-up Synthesis of Nanosheets at Various Interfaces,” K. Sasaki, Y. Uchida,\* N. Nishiyama, *ChemPlusChem*, Wiley, **88**, e202300255 (2023).
- 20) “液晶カプセルとしての細胞,” 内田幸明, 内藤財団時報, **111**, 34 (2023).
- 19) “液晶中の分子間磁気相互作用,” 内田幸明, ニュースレター, 新学術領域研究「量子液晶の物性科学」, **4**, 6 (2021).
- 18) “Spin symmetry breaking: Superparamagnetic and spin glass-like behavior observed in rod-like liquid crystalline organic compounds contacting nitroxide radical spins,” S. Sato,\* Y. Uchida,\* R. Tamura,\* *Symmetry*, MDPI Publishing, **12**, 1910 (2020).
- 17) “穴あき鋳型法による規則性多孔体の作製,” 内田幸明, 機能材料, シーエムシー出版, **40**, 12-19 (2020).
- 16) “強磁性液晶の実現と応用,” 内田幸明, 化学工学, 化学工学会, **83**, 244 (2019).
- 15) “自己組織化による液晶エマルジョンの機能化,” 内田幸明, Colloid & Interface Communication, 日本化学会コロイドおよび界面化学部会, **43**, 32 (2018).

- 14) “液晶性化合物のインフォマティクス,” 内田幸明, 化学工学, 化学工学会, **82**, 175 (2018).
- 13) “超膨潤ラメラ相中のナノシート生成,” 内田幸明, 西澤巧馬, 大宮 尊, 廣田雄一朗, 西山憲和, 液晶, 日本液晶学会, **22**, 37 (2018).
- 12) “分子の機能を引き出す最高の場としての液晶,” 内田幸明, 液晶, 日本液晶学会, **21**, 347 (2017).
- 11) “大阪大学の化学工学,” 内田幸明, 化学と工業, 日本化学会, **70**, 942 (2017).
- 10) “ソフトテンプレートを用いた機能性材料合成,” 内田幸明, ケミカルエンジニアリング, 化学工業社, **61**, 870-875 (2016).
- 9) “ソフトテンプレート材料合成,” 内田幸明, 化学と工業, 日本化学会, **69**, 1054 (2016).
- 8) “専門はさておき,” 内田幸明, 液晶, 日本液晶学会, **20**, 239 (2016).
- 7) “コレステリック液晶マイクロカプセルの作製と応用,” 内田幸明, 液晶, 日本液晶学会, **19**, 204-208 (2015).
- 6) “自律的に変形を繰り返す液晶液滴,” 内田幸明, 化学, 化学同人, **70**, 65-66 (2015).
- 5) “常磁性有機ラジカル液晶の磁性に関する研究,” 内田幸明, 電子スピンスイエンズ, 電子スピンスイエンズ学会, **22**, 4-9 (2014).
- 4) “コレステリックブルー相の安定化,” 内田幸明, 化学工学, 化学工学会, **78**, 155 (2014).
- 3) “超分子キラルニトロキシド液晶の磁気液晶効果,” 内田幸明, 電子スピンスイエンズ, 電子スピンスイエンズ学会, **20**, 24-25 (2013).
- 2) “純有機ニトロキシドラジカル液晶中における磁気液晶効果の観察,” 田村類, 内田幸明, 鈴木克明, 伊熊直彦, 下野智史, 能田洋平, 液晶, 日本液晶学会, **16**, 131-141 (2012).
- 1) “Paramagnetic all-organic chiral liquid crystals,” R. Tamura, \* Y. Uchida, N. Ikuma, *J. Mater. Chem.*, The Royal Society of Chemistry, **18**, 2872-2876 (2008).

## Patents

- 13) “pH 応答性液晶混合物及び pH 応答性液晶カプセル,” 内田幸明, 森脇愛利子, 特願 2019-213088 (2019年11月26日).
- 12) “ゼオライトのシート状粒子及びその製造方法,” 内田幸明, 佐々木弘毅, 西山憲和, 特願 2019-111523 (2019年6月14日).
- 11) “多孔成形体の製造方法,” 奥圭介, 伊藤晃寿, 藪浩, 内田幸明, 特願 2019-567066 (2019年1月21日).
- 10) “多孔質成形体の製造方法,” 奥圭介, 伊藤晃寿, 藪浩, 内田幸明, 特願 2019-567065 (2019年1月21日).
- 9) “多孔成形体,” 奥圭介, 伊藤晃寿, 藪浩, 内田幸明, 特願 2019-567064 (2019年1月21日).

- 8) “成形材料,” 奥圭介, 伊藤晃寿, 藪浩, 内田幸明, 特願 2019-567063 (2019 年 1 月 21 日).
- 7) “磁場応答液晶素子、及び磁場応答液晶装置,” 木村剛, 上田大貴, 内田幸明, 秋田拓也, 特願 2016-169015 (2016 年 8 月 31 日).
- 6) “金属有機構造体ナノシートおよびその製造方法,” 内田幸明, 大宮尊, 西山憲和, 特願 2016-144499 (2016 年 7 月 22 日).
- 5) “ニトロキシラジカルを含有する新規液晶性化合物,” 秋田拓也, 内田幸明, 特願 2016-192021 (2016 年 3 月 18 日).
- 4) “多孔フィルム、多孔フィルム製造方法、マイクロレンズアレイ、マイクロリアクターおよびバイオデバイス,” 岩井陽典, 内田幸明, 藪浩, 特願 2015-243016 (2015 年 12 月 12 日).
- 3) “新規液晶性化合物及びその分子集合体の移動を制御する方法,” 田村類, 内田幸明, 鈴木克明, 酒井健一, 特願 2008-58191 (2008 年 3 月 7 日).
- 2) “新規有機常磁性イオン液体化合物及びそれを含む支持電解質,” 田村類, 内田幸明, 沖成昭, 酒井健一, 特願 2008-57959 (2008 年 3 月 7 日).
- 1) “分子の集合体の運動を制御する方法,” 田村類, 内田幸明, 伊熊直彦, 特願 2007-251261 (2007 年 9 月 27 日).

他 2 件