

## Tohru TANIGUCHI (谷口透)

2024.9.24 updated



**Official address:** Hokkaido University, Frontier Research Center for Advanced Material and Life Science, Faculty of Advanced Life Science, Kita21, Nishi11, Kita-ku, Sapporo, Hokkaido 001-0021, Japan

**Tel:** +81-11-706-9048      **Fax:** +81-11-706-9540

**Email:** ttaniguchi [at] sci.hokudai.ac.jp

### Education and Working Experience

- Associate Professor at Faculty of Advanced Life Science, Hokkaido University (2023 – present)
- Senior Lecturer at Faculty of Advanced Life Science, Hokkaido University (2019 –2023)
- Assistant Professor at Faculty of Advanced Life Science, Hokkaido University (2010 – 2019)
- Postdoctoral Fellow at Department of Chemistry and Chemical Biology, Harvard University (2008 –2010)  
(Prof. Daniel Kahne)
- Postdoctoral Fellow at Department of Chemistry, Columbia University (2007 – 2008)  
(Prof. Koji Nakanishi)
- PhD. Science, Graduate School of Science, Hokkaido University (2007)  
(Adviser: Prof. Shin-Ichiro Nishimura and Prof. Kenji Monde)
- Visiting Scholar at Department of Chemistry, Columbia University (2005 – 2006)  
(Adviser: Prof. Koji Nakanishi)
- MS. Science, Graduate School of Science, Hokkaido University (2004)
- BS. Science, Faculty of Science, Hokkaido University (2002)

### Honors and Awards

- Thieme Chemistry Journals Award (2020)
- Banyu Chemist Award (BCA) (2019)
- Participant of the 2nd UK-Japan FoS Symposium (at Milton Keynes), selected by JSPS (2016)
- Award for Encouragement of Research in Polymer Science; The Society of Polymer Science, Japan (2015)  
平成 26 年度高分子研究奨励賞
- The Chemical Society of Japan Award for Young Chemists (2015)  
平成 26 年度日本化学会進歩賞
- Lecturer of Young Scholar Lecture Series, selected by The Chemical Society of Japan (2013)  
日本化学会「若い世代の特別講演会 (第 27 回)」選出  
<http://www.csj.jp/nenkai/standing/young.html>
- NOASTEC (Northern Advancement Center for Science & Technology) Presidential Prize (2012)  
ノーステック財団理事長賞  
<http://www.noastec.jp/topics/2012/11/post-87.html>
- Incentive Award at 54th Symposium on the Chemistry of Natural Products (2012)  
第 54 回天然有機化合物討論会奨励賞  
<http://www.tennenyuuki.ne.jp/index.html>
- Young Scientist's Research Award in Natural Product Chemistry at the 47th Natural Product Chemistry Meeting (2012)

平成 24 年度 天然物化学談話会第 12 回奨励賞  
<http://ndk.dip.jp/~shashin/danwa/award-past.html>

- Participant of the 59th Meeting of Nobel Prize Winners in Chemistry at Lindau, selected by JSPS (2009)  
<http://www.jsps.go.jp/j-lindau/koe2.html>  
(リンダウ・ノーベル賞受賞者会議参加者座談会 (2012) : [http://www.jsps.go.jp/j-lindau/koe\\_zadankai.html](http://www.jsps.go.jp/j-lindau/koe_zadankai.html))
- Uehara Memorial Foundation Postdoctoral Research Fellow (Uehara Memorial Foundation: 2009)
- Travel Award by the Stereochemical Society of Greater New York for the poster presentation at 19th International Symposium on Chirality (2007)
- JSPS postdoctoral fellow for research abroad (Japan Society for the Promotion of Science: 2007-2009)
- JSPS postdoctoral fellow (Japan Society for the Promotion of Science, PD: 2007-2010) (declined due to the acceptance for JSPS postdoctoral fellow for research abroad)
- The Chemical Society of Japan Student Presentation 2007 (2007)
- Best Poster Award (1st Place), 10th International Conference on Circular Dichroism (2005)
- JSPS research fellow (Japan Society for the Promotion of Science, DC2: 2005-2007)
- YKK scholar (Yoshida scholarship foundation, Doctor 21: 2004-2005)
- Best Poster Award, 9th International Conference on Circular Dichroism (2003)
- YKK scholar (Yoshida scholarship foundation, Master 21: 2002-2004)
- Clark Award for the Bachelor with the Best Academic Record (2002)

## Publications

95. *submitted.*

94. Tohru Taniguchi,\* Davidson Obinna Agbo, Qin Yang, Josef Kapitán, Tao Wu, Shuki Oyama, Shuji Akai, Yoshinari Sawama, Petr Bouř\*; Raman optical activity study of deuterated sugars: deuterium labelling as a tool for structural analysis. *Phys. Chem. Chem. Phys.* **2024**, *26*, 21568-21574.
93. Haruka Kataoka, Yuya Kakumu, Davidson Obinna Agbo, Tohru Taniguchi, Emiko Yanase\*; Computational Study on the Conformational Flexibility-Mediated Intramolecular Oxidative Spirocyclization of Procyanidin B4. *J. Org. Chem.* **2024**, *89*, 12240-12248.
92. Tohru Abe, Haruna Shiratori, Kosuke Kashiwazaki, Kazuma Hiasa, Daijiro Ueda, Tohru Taniguchi, Hajime Sato,\* Takashi Abe,\* Tsutomu Sato\*; Structural-model-based genome mining can efficiently discover novel non-canonical terpene synthases hidden in genomes of diverse species. *Chem. Sci.* **2024**, *15*, 10402-10407.
91. Riko Ataka, Tohru Taniguchi, Kenji Monde, Hitoshi Tamiaki\*; Determination of *N*-centered stereochemistry in N22-methylated chlorophyll-*a* derivatives and their epimer-dependent optical spectra. *Chirality* **2024**, *in press*.
90. Shotaro Hirota, Yusuke Ito, Shiro Inoue, Naoki Kitaoka, Tohru Taniguchi, Kenji Monde, Kosaku Takahashi, Hideyuki Matsuura\*; Isolation and Structure Determination of *cis*-OPDA- $\alpha$ -Monoglyceride from *Arabidopsis thaliana*. *J. Nat. Prod.* **2024**, *87*, 1358-1369.
89. Shotaro Nagami, Rintaro Kaguchi, Taichi Akahane, Yu Harabuchi, Tohru Taniguchi, Kenji Monde, Satoshi Maeda, Satoshi Ichikawa,\* Akira Katsuyama\*; Photoinduced dual bond rotation of a nitrogen-containing system realized by chalcogen substitution. *Nature Chem.* **2024**, *16*, 959-969.
88. Ryuichi Sakai,\* Ken Matsumura, Hajime Uchimasu, Kei Miyako, Tohru Taniguchi, V. Raghavendra Rao Kovvuri, Anjana Delphe Acharige, Kenneth G. Hull, Daniel Romo,\* Lakkana Thaveepornkul, Sarin Chimnarong,\* Hiroko Miyamoto, Ayato Takada, Hiromi Watari, Masaki J. Fujita, Jiro Sakaue; Dopamine-Derived Guanidine Alkaloids from a Didemnidae Tunicate: Isolation, Synthesis, and Biological Activities. *J. Org. Chem.* **2024**, *89*, 5977-5987.
87. Chengqian Pan, Hiroaki Ikeda, Mayuri Minote, Tensei Tokuda, Takefumi Kuranaga, Tohru Taniguchi, Naoya Shinzato, Hiroyasu Onaka, Hideaki Kakeya\*; Amoxetamide A, a new anois inducer, produced by combined-culture of *Amycolatopsis* sp. and *Tsukamurella pulmonis*. *J. Antibiot.* **2024**, *77*, 66-70.
86. Tohru Taniguchi,\* Davidson Obinna Agbo; Vibrational circular dichroism spectroscopy in the C-D, X $\equiv$ Y, and X=Y=Z stretching region. *Phys. Chem. Chem. Phys.* **2023**, *25*, 28567-28575.

85. Tohru Taniguchi; Vibrational Circular Dichroism Studies on Axially Chiral Carbodiimides and Allenes. *Synlett* **2023**, *34*, 1839-1844.
84. Tohru Taniguchi,\* Mutmainah, Shu Takimoto, Takahiro Suzuki, Soichiro Watanabe, Fuyuhiko Matsuda, Taiki Umezawa,\* Kenji Monde\*; Scope and Limitations of Absolute Configuration Determination of Allenic Natural Products Using C=C=C Stretching VCD Signal. *Org. Biomol. Chem.* **2023**, *21*, 569-574.
83. Akane Yamagishi; Yuki Egoshi; Makoto T. Fujiwara; Noriyuki Suzuki; Tohru Taniguchi; Ryuuichi D. Itoh; Yumiko Suzuki; Yoshiro Masuyama; Kenji Monde; Toyonobu Usuki\*; Total Synthesis, Absolute Configuration, and Phytotoxic Activity of Foeniculoxin. *Chem. Eur. J.* **2023**, *29*, e202203396.
82. Bojan P. Bondžić; Konstantinos Daskalakis; Tohru Taniguchi, Kenji Monde; Yujiro Hayashi\*; Stereoselective Construction of Fluorinated Quaternary Stereogenic Centers via an Organocatalytic Asymmetric exo-Selective Diels-Alder Reaction in the Presence of Water. *Org. Lett.* **2022**, *24*, 7455-7460.
81. Tohru Taniguchi,\* Naka Ida, Takuya Kitahara, Davidson Obinna Agbo, Kenji Monde\*; Stereochemical analysis of flexible oxidized fatty acids by VCD spectroscopy. *Chem. Commun.* **2022**, *58*, 6116-6119.
80. Santanu Mondal, Ravindra D. Aher, Venkati Bethi, Yu-Ju Lin, Tohru Taniguchi, Kenji Monde, Fujie Tanaka\*; Control of Reactions of Pyruvates by Catalysts: Direct Enantioselective Mannich Reactions of Pyruvates Catalyzed by Amine-based Catalyst Systems. *Org. Lett.* **2022**, *24*, 1853-1858.
79. Sayaka Mizuno, Ryo Miyata, Kazuma Mukaide, Sari Honda, Agus Sukito, Muhamad Sahlan, Tohru Taniguchi, Shigenori Kumazawa\*; New compound from the plant origin of propolis from Lombok, Indonesia and its antibacterial activity. *Results Chem.* **2022**, *4*, 100276.
78. Mohamad Zarif Mohd Zubir, Nurul Fajry Maulida, Yoshihiro Abe, Yuta Nakamura, Mariam Abdelrasoul, Tohru Taniguchi,\* Kenji Monde\*; Deuterium Labelling to Extract Local Stereochemical Information by VCD Spectroscopy in C-D Stretching Region: A Case Study of Sugars. *Org. Biomol. Chem.* **2022**, *20*, 1067-1072.
77. Tohru Taniguchi,\* Mohamad Zarif Mohd Zubir, Nobuyuki Harada, Kenji Monde\*; Exploration of chromophores for a VCD couplet in a spectrally transparent infrared region for biomolecules. *Phys. Chem. Chem. Phys.* **2021**, *23*, 27525-27532.
76. Nariyoshi Umekubo, Tohru Taniguchi, Kenji Monde, Yujiro Hayashi\*; Synthesis of Bicyclo[2.2.2]octanes with a Quaternary Bridgehead Carbon by Diphenylprolinol Silyl Ether-mediated Domino Reaction. *Asian J. Org. Chem.* **2021**, *10*, 3261-3265.
75. Seitaro Koshino, Tohru Taniguchi, Kenji Monde, Eunsang Kwon, Yujiro Hayashi\*; Enantiodivergent One-Pot Synthesis of Axially Chiral Biaryls Using Organocatalyst-Mediated Enantioselective Domino Reaction and Central-to-Axial Chirality Conversion. *Chem.-Eur. J.* **2021**, *27*, 15786-15794.
74. Philipp Moosmann, Tohru Taniguchi, Kazuo Furihata, Hiroaki Utsumi, Yuji Ise, Yasuhiro Morii, Nobuhiro Yamawaki, Tomohiro Takatani, Osamu Arakawa, Shigeru Okada, Shigeki Matsunaga\*; Myrindole A, an Antimicrobial Bis-indole from a Marine Sponge *Myrmekioderma* sp. *Org. Lett.* **2021**, *23*, 3477-3480.
73. Yohei Morishita, Yu Aoki, Yu Aoki, Mei Ito, Daisuke Hagiwara, Kensho Torimaru, Daichi Morita, Teruo Kuroda, Hanako Fukano, Yoshihiko Hoshino, Masato Suzuki, Tohru Taniguchi, Keiji Mori, Teigo Asai; Genome Mining-Based Discovery of Fungal Macrolides Modified by glycosylphosphatidylinositol (GPI)-Ethanolamine Phosphate Transferase Homologues. *Org. Lett.* **2020**, *22*, 5876-5879.
72. Hiroko Tani, Hiroyuki Koshino, Tohru Taniguchi, Maiko Yoshimatsu, Susumu Hikami, Shunya Takahashi; Structural Studies on Stilbene Oligomers Isolated from the Seeds of Melinjo (*Gnetum gnemon* L.). *ACS Omega* **2020**, *5*, 12245-12250.
71. Haruka Murakami, Tomohiro Asakawa, Yoshihiro Muramatsu, Ryo Ishikawa, Aiki Hiza, Yuta Tsukaguchi, Yohei Tokumaru, Masahiro Egi, Makoto Inai, Hitoshi Ouchi, Fumihiko Yoshimura, Tohru Taniguchi, Yoshinobu Ishikawa, Mitsuru Kondo, Toshiyuki Kan; Total Synthesis of Sophoraflavanone H and Confirmation of Its Absolute Configuration. *Org. Lett.* **2020**, *22*, 3820-3824.
70. Yohei Morishita, Terutaka Sonohara, Tohru Taniguchi, Kiyohiro Adachi, Makoto Fujita, Teigo Asai; Synthetic-biology-based discovery of a fungal macrolide from *Macrophomina phaseolina*. *Org. Biomol. Chem.* **2020**, *18*, 2813-2816.

69. Seitaro Koshino, Akira Takikawa, Keiichi Ishida, [Tohru Taniguchi](#), Kenji Monde, Eunsang Kwon, Shigenobu Umemiya, Yujiro Hayashi; Inversion of the Axial Information during Oxidative Aromatization in the Synthesis of Axially Chiral Biaryls with Organocatalysis as a Key Step. *Chem.–Eur. J.* **2020**, *26*, 4524-4530.
68. Hironori Okamura, Takanobu Fujioka, Naoki Mori, [Tohru Taniguchi](#), Kenji Monde, Hidenori Watanabe, Hirosato Takikawa; First enantioselective synthesis of salinipostin A, a marine cyclic enol-phosphotriester isolated from *Salinispora* sp. *Tetrahedron Lett.* **2019**, *60*, 150917. <https://doi.org/10.1016/j.tetlet.2019.07.008>
67. Yohei Morishita, Huiping Zhang, [Tohru Taniguchi](#), Keiji Mori, Teigo Asai; The Discovery of Fungal Polyene Macrolides via a Postgenomic Approach Reveals a Polyketide Macrocyclization by *trans*-Acting Thioesterase in Fungi. *Org. Lett.* **2019**, *21*, 4788-4792.
66. Akiho Kaneko, Yohei Morishita, Kento Tsukada, [Tohru Taniguchi](#), Teigo Asai; Post-genomic approach based discovery of alkylresorcinols from a cricket-associated fungus, *Penicillium soppii*. *Org. Biomol. Chem.* **2019**, *17*, 5239-5243.
65. Yohei Morishita, Yusuke Okazaki, Yi Yi Luo, Jun Nunoki, [Tohru Taniguchi](#), Yoshiteru Oshima, Teigo Asai; Use of plant hormones to activate silent polyketide biosynthetic pathways in *Arthrimum sacchari*, a fungus isolated from a spider. *Org. Biomol. Chem.* **2019**, *17*, 780-784.
64. Christiane Kiske, Anja Devenie Riegel, Ronja Hopf, Anna Kvindt, Iulia Poplacean, [Tohru Taniguchi](#), Mahadeva M. M. Swamy, Kenji Monde, Wolfgang Eisenreich, Karl-Heinz Engel; Determination of the Absolute Configurations and Sensory Properties of the Enantiomers of a Homologous Series (C6-C10) of 2-Mercapto-4-alkanones. *J. Agric. Food Chem.* **2019**, *67*, 1187-1196.
63. [Tohru Taniguchi](#), Takahiro Suzuki, Haruka Satoh, Yukatsu Shichibu, Katsuaki Konishi, Kenji Monde; Preparation of Carbodiimides with One-Handed Axial Chirality. *J. Am. Chem. Soc.* **2018**, *140*, 15577-15581.
62. Chiaki Katakami, Shogo Kamo, Ayame Torii, Nobuyuki Hara, Yoshitane Imai, [Tohru Taniguchi](#), Kenji Monde, Yusuke Okabayashi, Takuya Hosokai, Kouji Kuramochi, Kazunori Tsubaki; Synthesis and Photochemical Properties of Axially Chiral Bis(dinaphthofuran). *J. Org. Chem.* **2018**, *133*, 14610-14616.
61. Ryo Murakami, Kentaro Sano, Tomohiro Iwai, [Tohru Taniguchi](#), Kenji Monde, Masaya Sawamura; Palladium-Catalyzed Asymmetric C(sp<sup>3</sup>)-H Allylation of 2-Alkylpyridines. *Angew. Chem. Int. Ed.* **2018**, *57*, 9465-9469.
60. Ken Matsumura, [Tohru Taniguchi](#), James D. Reimer, Shuntaro Noguchi, Masaki J. Fujita, Ryuichi Sakai; KB343, a Cyclic Tris-guanidine Alkaloid from Palauan Zoantharian *Epizoanthus illoricatus*. *Org. Lett.* **2018**, *20*, 3039-3043.
59. Genki Kawauchi, Shigenobu Umemiya, [Tohru Taniguchi](#), Kenji Monde, Yujiro Hayashi; Enantio- and Diastereoselective Synthesis of Latanoprost using an Organocatalyst. *Chem.–Eur. J.* **2018**, *24*, 8409-8414.
58. Takahiro Hongen, [Tohru Taniguchi](#), Kenji Monde; Modifying oligoalanine conformation by replacement of amide to ester linkage. *Chirality* **2018**, *30*, 396-401.
57. Koji Narita, Hajime Sato, Atsushi Minami, Kosei Kudo, Lei Gao, Chengwei Liu, Taro Ozaki, Motoichiro Kodama, Xiaoguang Lei, [Tohru Taniguchi](#), Kenji Monde, Mami Yamazaki, Masanobu Uchiyama, Hideaki Oikawa; Focused Genome Mining of Structurally Related Sesterterpenes: Enzymatic Formation of Enantiomeric and Diastereomeric Products. *Org. Lett.* **2017**, *19*, 6696-6699. doi: 10.1021/acs.orglett.7b03418
56. [Tohru Taniguchi](#); Analysis of Molecular Configuration and Conformation by Electronic and Vibrational Circular Dichroism: Theoretical Calculation and Exciton Chirality Method. *Bull. Chem. Soc. Jpn.* **2017**, *90*, 1005-1016.
55. Yurie Takayama, Takaoki Ishii, Hirohisa Ohmiya, Tomohiro Iwai, Martin C. Schwarzer, Seiji Mori, [Tohru Taniguchi](#), Kenji Monde, Masaya Sawamura; Asymmetric Synthesis of  $\beta$ -Lactams through Copper-Catalyzed Alkyne-Nitrone Coupling with Prolinol-Phosphine Chiral Ligand. *Chem.–Eur. J.* **2017**, *23*, 8400-8404.
54. Ji-Rong Huang, Muhammad Sohail, [Tohru Taniguchi](#), Kenji Monde, Fujie Tanaka; Formal (4+1) Cycloaddition and Enantioselective Michael-Henry Cascade Reactions to Synthesize Spiro[4,5]decanes and Spirooxindole Polycycles. *Angew. Chem. Int. Ed.* **2017**, *56*, 5853-5857.
53. [Tohru Taniguchi](#)<sup>†</sup>, Kie Nakano<sup>†</sup>, Ryosuke Baba, Kenji Monde; Analysis of Configuration and Conformation of Furanose Ring in Carbohydrate and Nucleoside by Vibrational Circular Dichroism. *Org. Lett.* **2017**, *19*, 404-407.

(† equal contribution)

52. Koji Kasamatsu, Tomoyuki Yoshimura, Attila Mandi, [Tohru Taniguchi](#), Kenji Monde, Takumi Furuta, Takeo Kawabata;  $\alpha$ -Arylation of  $\alpha$ -Amino Acid Derivatives with Arynes via Memory of Chirality: Asymmetric Synthesis of Benzocyclobutenones with Tetrasubstituted Carbon. *Org. Lett.* **2017**, *19*, 352-355.
51. Christiane Kiske, Svenja Nörenberg, Miriam Ecker, Xingyue Ma, [Tohru Taniguchi](#), Kenji Monde, Wolfgang Eisenreich, Karl-Heinz Engel; Reinvestigation of the Absolute Configurations of Chiral  $\beta$ -Mercaptoalkanones Using Vibrational Circular Dichroism and  $^1\text{H}$  NMR Analysis. *J. Agric. Food Chem.* **2016**, *64*, 8563-8571.
50. Kazuya Douki, Hiroyuki Ono, [Tohru Taniguchi](#), Jun Shimokawa, Masato Kitamura, Tohru Fukuyama; Enantioselective Total Synthesis of (+)-Hinckdentine A via a Catalytic Dearomatization Approach. *J. Am. Chem. Soc.* **2016**, *138*, 14578-14581.
49. Yujiro Hayashi, Bojan P. Bondzic, Tatsuya Yamazaki, Yogesh Gupta, Shin Ogasawara, [Tohru Taniguchi](#), Kenji Monde; Asymmetric Diels–Alder reaction of  $\alpha$ -substituted and  $\beta,\beta$ -disubstituted  $\alpha,\beta$ -enals via diarylprolinol silyl ether for the construction of all-carbon quaternary stereocenters. *Chem.–Eur. J.* **2016**, *22*, 15874-15880.
48. Shoma Mizutani, Kenta Komori, [Tohru Taniguchi](#), Kenji Monde, Kouji Kuramochi, Kazunori Tsubaki; A Bioinspired Synthesis of ( $\pm$ )-Rubrobramide, ( $\pm$ )-Flavipucine, and Isoflavipucine. *Angew. Chem. Int. Ed.* **2016**, *55*, 9553-9556.
47. [Tohru Taniguchi](#), Takahiro Hongen, Kenji Monde; Studying the stereostructures of biomolecules and their analogs by vibrational circular dichroism. *Polym. J.* **2016**, *48*, 925-931.  
(Selected as a Featured Article)
46. [Tohru Taniguchi](#), Mai Asahata, Akihito Nasu, Yukatsu Shichibu, Katsuaki Konishi, Kenji Monde; Facile Diastereoseparation of Glycosyl Sulfoxides by Chiral Stationary Phase. *Chirality* **2016**, *28*, 534-539.
45. Attila Mándi, Mahadeva M. M. Swamy, [Tohru Taniguchi](#), Masaki Anetai, Kenji Monde; Reducing Molecular Flexibility by Derivatization for Elucidation of Absolute Configuration by CD Calculations: Daurichromenic Acid. *Chirality* **2016**, *28*, 453-459.
44. Siyuan Wang<sup>†</sup>, [Tohru Taniguchi](#)<sup>†</sup>, Kenji Monde, Masatoshi Kawahata, Kentaro Yamaguchi, Yuko Otani, Tomohiko Ohwada; Hydrogen Bonding to Carbonyl Oxygen of Nitrogen-Pyramidalized Amide – Detection of Pyramidalization Direction Preference by Vibrational Circular Dichroism Spectroscopy. *Chem. Commun.* **2016**, *52*, 4018-4021.  
(† equal contribution)
43. Mikako Kato, Mostafa A. S. Hammam, [Tohru Taniguchi](#), Yoshiko Suga, Kenji Monde; What is the True Structure of D609, a Widely Used Lipid Related Enzyme Inhibitor? *Org. Lett.* **2016**, *18*, 768-771.
42. Yu-ki Tahara, Shuhei Obinata, Kyalo S. Kanyiva, Takanori Shibata, Attila Mándi, [Tohru Taniguchi](#), Kenji Monde; Enantioselective Synthesis of Aminoindan Carboxylic Acid Derivatives by the Catalytic Intramolecular [2+2+2] Cycloaddition of Amino-Acid-Tethered Triynes. *Eur. J. Org. Chem.* **2016**, *2016*, 1405-1413.
41. Teigo Asai, Shuntaro Morita, [Tohru Taniguchi](#), Kenji Monde, Yoshiteru Oshima; Epigenetic stimulation of polyketide production in *Chaetomium cancroideum* by an NAD<sup>+</sup>-dependent HDAC Inhibitor. *Org. Biomol. Chem.* **2016**, *14*, 646-651.
40. Yoshihiro Yaguchi, Atsufumi Nakahashi, Nobuaki Miura, [Tohru Taniguchi](#), Daisuke Sugimoto, Makoto Emura, Kyoko Zaizen, Yumi Kusano, Kenji Monde; Vibrational CD (VCD) Spectroscopy as a Powerful Tool for Chiral Analysis of Flavor Compounds. *ACS Symp. Ser. "Importance of Chirality to Flavor Compounds"* **2015**, *1212*, 35-56.
39. [Tohru Taniguchi](#), Daisuke Manai, Masataka Shibata, Yutaka Itabashi, Kenji Monde; Stereochemical Analysis of Glycerophospholipids by Vibrational Circular Dichroism. *J. Am. Chem. Soc.* **2015**, *137*, 12191-12194.
38. Ying Ye, Atsushi Minami, Attila Mándi, Chengwei Liu, [Tohru Taniguchi](#), Tomohisa Kuzuyama, Kenji Monde, Katsuya Gomi, Hideaki Oikawa; Genome Mining for Sesterterpenes Using Bifunctional Terpene Synthases Reveals a Unified Intermediate of Di/Sesterterpenes. *J. Am. Chem. Soc.* **2015**, *137*, 11846-11853.
37. Yujiro Hayashi, Tatsuya Yamazaki, Yuki Nakanishi, Tsuyoshi Ono, [Tohru Taniguchi](#), Kenji Monde, Tadafumi Uchamaru; Asymmetric Nitrocyclopropanation of  $\alpha$ -Substituted  $\alpha,\beta$ -Enals Catalyzed by Diphenylprolinol Silyl

- Ether for the Construction of All-Carbon Quaternary Stereogenic Centers. *Eur. J. Org. Chem.* **2015**, 2015, 5747-5754.
36. Poonam Khandelwal, Pahup Singh, Tohru Taniguchi, Kenji Monde, Kohei Johmoto, Hidehiro Uekusa, Hironori Masubuti, Yoshinori Fujimoto; Revision of the relative and absolute stereochemistries of 3-hydroxydehydroiso- $\alpha$ -lapachone and its 8-hydroxy derivative. *Phytochemistry Lett.* **2014**, 10, 224-229.
35. Takahiro Hongen, Tohru Taniguchi, Shintaro Nomura, Jun-ichi Kadokawa, Kenji Monde; In Depth Study on Solution-State Structure of Poly(lactic acid) by Vibrational Circular Dichroism. *Macromolecules* **2014**, 47, 5313-5319.  
(Highlighted in "Hot Topics"; *Polymers* **2016**, 65, 287.)
34. Kenta Komori, Tohru Taniguchi, Shoma Mizutani, Kenji Monde, Kouji Kuramochi, Kazunori Tsubaki; Short Synthesis of Berkeleyamide D and Determination of the Absolute Configuration by the Vibrational Circular Dichroism Exciton Chirality Method. *Org. Lett.* **2014**, 16, 1386-1389.
33. Takuro Shibuta, Shigeki Sato, Masatoshi Shibuya, Naoki Kanoh, Tohru Taniguchi, Kenji Monde, Yoshiharu Iwabuchi; Enantioselective Intramolecular Aza-spiroannulation onto Benzofurans Using Chiral Rhodium Catalysis. *Heterocycles* **2014**, 89, 631-639.
32. Teigo Asai, Takashi Yamamoto, Naoki Shirata, Tohru Taniguchi, Kenji Monde, Isao Fujii, Katsuya Gomi, Yoshiteru Oshima; Structurally Diverse Chaetophenol Productions Induced by Chemically Mediated Epigenetic Manipulation of Fungal Gene Expression. *Org. Lett.* **2013**, 15, 3346-3349.
31. Teigo Asai<sup>†</sup>, Tohru Taniguchi<sup>†</sup>, Takashi Yamamoto, Kenji Monde, Yoshiteru Oshima; Structures of Spiroindicumides A and B, Unprecedented Carbon Skeletal Spirolactones, and Determination of the Absolute Configuration by Vibrational Circular Dichroism Exciton Approach. *Org. Lett.* **2013**, 15, 4320-4323.  
(<sup>†</sup> equal contribution)
30. Teigo Asai, Sae Otsuki, Tohru Taniguchi, Kenji Monde, Kouwa Yamashita, Hiroaki Sakurai, Tomoji Ozeki, Yoshiteru Oshima; Structures and absolute configurations of short-branched fatty acid dimers from an endophytic fungus of *Aloe arborescens*. *Tetrahedron Lett.* **2013**, 54, 3402-3405.
29. Teigo Asai, Shuntaro Morita, Naoki Shirata, Tohru Taniguchi, Kenji Monde, Hiroaki Sakurai, Tomoji Ozeki, Yoshiteru Oshima; Structural Diversity of New C<sub>13</sub>-Polyketides Produced by *Chaetomium mollipilium* Cultivated in the Presence of a NAD<sup>+</sup>-Dependent Histone Deacetylase Inhibitor. *Org. Lett.* **2012**, 14, 5456-5459.
28. Teigo Asai, Dan Luo, Yutaro Obata, Tohru Taniguchi, Kenji Monde, Kouwa Yamashita, Yoshiteru Oshima; Dihydrobenzofurans as cannabinoid receptor ligands from *Cordyceps annullata*, an entomopathogenic fungus cultivated in the presence of an HDAC inhibitor. *Tetrahedron Lett.* **2012**, 53, 2239-2243.
27. Tohru Taniguchi, Kenji Monde; Optical Rotation, Electronic Circular Dichroism and Vibrational Circular Dichroism of Carbohydrates and Glycoconjugates. *Comprehensive Chiroptical Spectroscopy*; N. Berova, P. L. Polavarapu, K. Nakanishi, R. Woody Ed.; John Wiley & Sons: Hoboken, **2012**; Vol. 2, pp. 795-818.
26. Tohru Taniguchi, Kenji Monde; Exciton Chirality Method in Vibrational Circular Dichroism. *J. Am. Chem. Soc.* **2012**, 134, 3695-3698.  
(Highlighted in "Spotlights on Recent JACS Publications"; *J. Am. Chem. Soc.* **2012**, 134, 5005-5005.)
25. Tohru Taniguchi, Toyonobu Usuki; Circular Dichroism Spectroscopy. *Supramolecular Chemistry: from Molecules to Nanomaterials*; P. A. Gale, J. W. Steed Ed.; John Wiley & Sons: Hoboken, **2012**; Vol. 2, pp. 393-410.
24. Charles Marié, Yuan Xiong, Geanna K. Min, Adam R. Yeager, Tohru Taniguchi, Nina Berova, Scott E. Schaus, John A. Porco, Jr.; Enantioselective Synthesis of 3,4-Chromanediones via Asymmetric Rearrangement of 3-Allyloxyflavones. *J. Org. Chem.* **2010**, 75, 4584-4590.
23. Tania J. Lupoli, Tohru Taniguchi, Tsung-Shing Wang, Deborah L. Perlstein, Suzanne Walker, Daniel E. Kahne; Studying a Cell Division Amidase Using Defined Peptidoglycan Substrates. *J. Am. Chem. Soc.* **2009**, 131, 18230-18231.
22. Tohru Taniguchi, Connor L. Martin, Kenji Monde, Koji Nakanishi, Nina Berova, Larry E. Overman; Absolute Configuration of Actinophyllic Acid As Determined through Chiroptical Data. *J. Nat. Prod.* **2009**, 72, 430-432.

21. Tohru Taniguchi, Koji Nakanishi; Circular Dichroism (CD) for Natural Products. *Wiley Encyclopedia of Chemical Biology*; T. P. Begley Ed.; John Wiley & Sons: Hoboken, **2009**; Vol. 3, pp. 368-378.
20. Tohru Taniguchi, Kenji Monde, Koji Nakanishi, Nina Berova; Chiral sulfonates studied by optical rotation, ECD and VCD: the absolute configuration of a cruciferous phytoalexin brassicanal C. *Org. Biomol. Chem.* **2008**, *6*, 4399-4405.
19. Tohru Taniguchi, Ikuko Tone, Kenji Monde; Observation and Characterization of a Specific Vibrational Circular Dichroism Band in Phenyl Glycosides. *Chirality* **2008**, *20*, 446-453.
18. Atsufumi Nakahashi, Tohru Taniguchi, Nobuaki Miura, Kenji Monde; Stereochemical Studies of Sialic Acid Derivatives by VCD. *Org. Lett.* **2007**, *9*, 4741-4744.
17. Tohru Taniguchi, Kenji Monde; Chiroptical Analysis of Glycoconjugates by Vibrational Circular Dichroism (VCD). *Trends Glycosci. Glycotech.* **2007**, *19*, 147-164.
16. Tohru Taniguchi, Kenji Monde; Spectrum–Structure Relationship in Carbohydrate Vibrational Circular Dichroism and Its Application to Glycoconjugates. *Chem. Asian J.* **2007**, *2*, 1258-1266.
15. Hla M. Min, Mya Aye, Tohru Taniguchi, Nobuaki Miura, Kenji Monde, Kazuhiko Ohzawa, Toshiaki Nikai, Masatake Niwa, Yoshiaki Takaya; A structure and an absolute configuration of (+)-alternamin, a new coumarin from *Murraya alternans* having antidote activity against snake venom. *Tetrahedron Lett.* **2007**, *48*, 6155-6158.
14. Hisako Sato, Tohru Taniguchi, Atsufumi Nakahashi, Kenji Monde, Akihiko Yamagishi; Effects of Central Metal Ions on Vibrational Circular Dichroism Spectra of Tris-( $\beta$ -diketonato)metal(III) Complexes. *Inorg. Chem.* **2007**, *46*, 6755-6766.
13. Gerhard Schlingmann, Tohru Taniguchi, Haiyin He, Ramunas Bigelis, Hui Y. Yang, Frank E. Koehn, Guy T. Carter, Nina Berova; Reassessing the Structure of Pyranonigrin. *J. Nat. Prod.* **2007**, *70*, 1180-1187.
12. Tohru Taniguchi, Kenji Monde; Vibrational Circular Dichroism (VCD) studies on disaccharides in the CH region: Toward discrimination of glycosidic linkage position. *Org. Biomol. Chem.* **2007**, *5*, 1104-1110.
11. Kenji Monde, Tohru Taniguchi, Nobuaki Miura, Charles S. Vairappan, Minoru Suzuki; Absolute configurations of endoperoxides determined by vibrational circular dichroism (VCD). *Tetrahedron Lett.* **2006**, *47*, 4389-4392.
10. Tohru Taniguchi, Kenji Monde, Shin-Ichiro Nishimura, Jun Yoshida, Hisako Sato, Akihiko Yamagishi; Rewinding of Helical Systems by Use of the Cr(III) Complex as a Photoresponsive Chiral Dopant. *Mol. Cryst. Liq. Cryst.* **2006**, *460*, 107-116.
9. Kenji Monde, Nobuaki Miura, Mai Hashimoto, Tohru Taniguchi, Tamotsu Inabe; Conformational Analysis of Chiral Helical Perfluoroalkyl Chains by VCD. *J. Am. Chem. Soc.* **2006**, *128*, 6000-6001.
8. Kenji Monde, Tohru Taniguchi, Nobuaki Miura, Charles S. Vairappan, Minoru Suzuki; Absolute Configurations of Brominated Sesquiterpenes Determined by Vibrational Circular Dichroism. *Chirality* **2006**, *18*, 335-339.
7. Hisako Sato, Tohru Taniguchi, Kenji Monde, Shin-Ishiro Nishimura, Akihiko Yamagishi; Dramatic Effects of d-Electron Configurations on Vibrational Circular Dichroism Spectra of Tris(acetylacetonato)metal(III). *Chem. Lett.* **2006**, *35*, 364-365.
6. Nobuaki Miura, Tohru Taniguchi, Kenji Monde, Shin-Ichiro Nishimura; A theoretical study of  $\alpha$ - and  $\beta$ -D-glucopyranose conformation by the density functional theory. *Chem. Phys. Lett.* **2006**, *419*, 326-332.
5. Kenji Monde, Tohru Taniguchi, Nobuaki Miura, Peter Kutschy, Zuzana Curillova, Martina Pilatova, Jan Mojzic; Chiral Cruciferous Phytoalexins: Preparation, Absolute Configuration, and Biological Activity. *Bioorg. Med. Chem.* **2005**, *13*, 5206-5212.
4. Tohru Taniguchi, Kenji Monde, Nobuaki Miura, Shin-Ichiro Nishimura; A characteristic CH band in VCD of methyl glycosidic carbohydrates. *Tetrahedron Lett.* **2004**, *45*, 8451-8453.
3. Kenji Monde, Tohru Taniguchi, Nobuaki Miura, Shin-Ichiro Nishimura; Specific Band Observed in VCD predicts the Anomeric Configuration of Carbohydrates. *J. Am. Chem. Soc.* **2004**, *126*, 9496-9497. (Highlighted in *Lett. Org. Chem.* **2005**, *2*, 207-207.)
2. Tohru Taniguchi, Nobuaki Miura, Shin-Ichiro Nishimura, Kenji Monde; Vibrational circular dichroism - Chiroptical analysis of biomolecules. *Mol. Nutr. Food Res.* **2004**, *48*, 246-254.

1. Kenji Monde, Tohru Taniguchi, Nobuaki Miura, Shin-Ichiro Nishimura, Nobuyuki Harada, Rina K. Dukor, Laurence A. Nafie; Preparation of cruciferous phytoalexin related metabolites, (-)-dioxibrassinin and (-)-3-cyanomethyl-3-hydroxyoxindole, and determination of their absolute configurations by vibrational circular dichroism (VCD). *Tetrahedron Lett.* **2003**, *44*, 6017-6020.

## Other Publications

11. 谷口透 「スペクトル理論計算を用いた構造解析の注意点」有機合成化学協会誌 **2024**, *82*, 178-187.  
Tohru Taniguchi; Note for a better reliability of structural analysis by spectral calculations. *J. Synth. Org. Chem. Jpn.* **2024**, *82*, 178-187. (written in Japanese)
10. 谷口透 「赤外円二色性分光法で見る溶液中分子の世界」化学と教育 **2019**, *66*, 825.  
Tohru Taniguchi; The World of Solution-State Molecules Seen with Using Vibrational Circular Dichroism Spectroscopy. *Chemistry and Education* **2019**, *66*, 825-826. (written in Japanese)
9. Tohru Taniguchi, Kie Nakano, Kenji Monde; Stereochemistry (and Conformation) of Nucleosides and Their Synthetic Precursors by Vibrational Circular Dichroism. *Current Protocols in Nucleic Acid Chemistry* **2018**, *72*, 7.29.1-7.29.9. doi: 10.1002/cpnc.50
8. 谷口透、門出健次 「円二色性(CD)・赤外円二色性(VCD)による立体構造解析 ～実践例と注意点～」有機合成化学協会誌 **2017**, *75*, 522-529.  
Tohru Taniguchi, Kenji Monde; Practical Use of Circular Dichroism and Vibrational Circular Dichroism for Structural Analysis. *J. Synth. Org. Chem. Jpn.* **2017**, *75*, 522-529. (written in Japanese)
7. 谷口透 「鏡の国の核酸医薬？ D-microRNA を標的とする L-RNA アプタマー」化学 **2016**, *71* (8), 59-60.  
Tohru Taniguchi; Nucleic Acid Medicine from the Mirror World? L-RNA aptamers that target D-microRNA. *Chemistry* **2016**, *71* (8), 59-60. (written in Japanese)
6. 門出健次、谷口透 「VCD 励起子キラリティー法」分光研究 **2016**, *65*, 137-144.  
Kenji Monde, Tohru Taniguchi; VCD exciton chirality method. *J. Spectrosc. Res. Jpn.* **2016**, *65*, 137-144. (written in Japanese)
5. Tohru Taniguchi; 3D-Structural Analysis of Polymers in Solution by Vibrational Circular Dichroism. *Polymers* **2016**, *65*, 287.
4. 谷口透 「赤外円二色性による天然物の三次元構造解明」現代化学 **2015**, *531*, 34-35.  
Tohru Taniguchi; Elucidating the 3D Structure of Natural Products by Vibrational Circular Dichroism. *Chemistry Today* **2015**, *531*, 34-35. (written in Japanese)
3. 谷口透 「簡単に溶液状態の分子の立体構造を解析：赤外円二色性キラル分光法」現代化学 **2014**, *518*, 47-51.  
Tohru Taniguchi; Easy Access to Molecular Stereostructure in Solution – Vibrational Circular Dichroism. *Chemistry Today* **2014**, *518*, 47-51. (written in Japanese)
2. 谷口透 「赤外円二色性によるキラル分子の構造解析」化学と工業 **2013**, *66*, 825-826.  
Tohru Taniguchi; Structural Analysis of Chiral Molecules by Vibrational Circular Dichroism. *Chemistry and Chemical Industry* **2013**, *66*, 825-826. (written in Japanese)
1. 門出健次、三浦信明、谷口透 「赤外円二色性を用いた絶対配置決定 - 誘導化を必要としない溶液状態での絶対配置決定法」化学と生物 **2007**, *45*, 455-458.  
Kenji Monde, Nobuaki Miura, Tohru Taniguchi; Absolute configuration determination using vibrational circular dichroism. Method for absolute configuration determination in the solution state without induction. *Kagaku to Seibutsu* **2007**, *45*, 455-458. (written in Japanese)