Curriculum Vitae
Kenta Rakumitsu Ph.D.

Assistant Prosessor

Department of Materials and Life Science,

Faculty of Science and Technology, Seikei University

Phone: 0422-37-3705 E-mail: k_rakumitsu@st.seikei.ac.jp

Date of Birth: Sep 19, 1993

Education

Apr. 2012-Mar. 2016	B.Sc. in Organic Chemistry, Kumamoto University (Prof. Hayato Ishikawa)
Apr. 2016-Mar. 2018	M.Sc. in Organic Chemistry, Kumamoto University (Prof. Hayato Ishikawa)
Apr. 2018-Mar. 2021	Ph.D. in Organic Chemistry, Kumamoto University (Prof. Hayato Ishikawa) Thesis title: Bioinspired Collective Total Syntheses of Secologanin and Glycosylated Monoterpenoid Indole Alkaloids

Academic Career

Arp. 2021-Mar. 2024	Assistant Professor, Department of Materials and Life Science, Faculty of Science and Technology, Seikei University working with Professor Akihiro Yokoyama
Arp. 2024-present	Assistant Professor, Graduate School of Pharmaceutical Sciences, Chiba University working with Professor Hayato Ishikawa

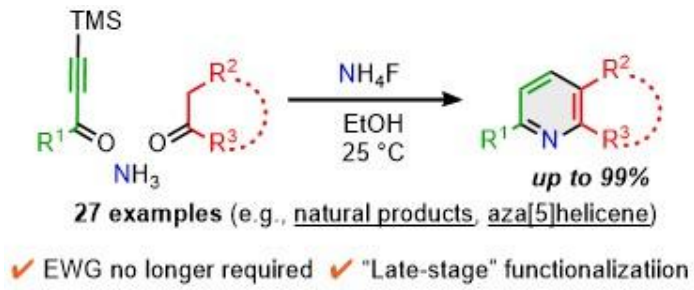
Publications

Original PaPers

(14) Bioinspired Total Synthesis and Structural Reidentification of Alstrostines

Keita Ikeno, Haruna Oku, Kenta Rakumitsu, Mariko Kitajima, Hayato Ishikawa*

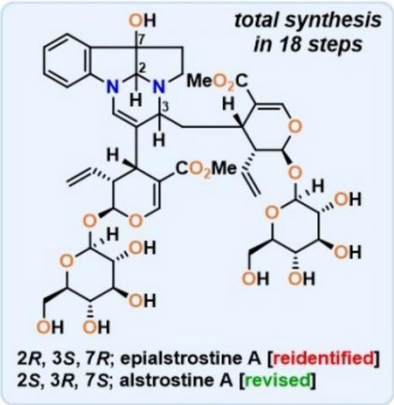
Chem. Eur. J., **2025**, e202500298. DOI: https://doi.org/10.1002/chem.202500298



(13) Bioinspired Total Synthesis and Structural Reidentification of Alstrostines

Daiki Hiruma, Akiho Yoshidome, Kenta Rakumitsu, Mariko Kitajima, Yuki Hitora, Sachiko Tsukamoto, Johann Schinnerl, Lothar Brecker, Hayato Ishikawa*

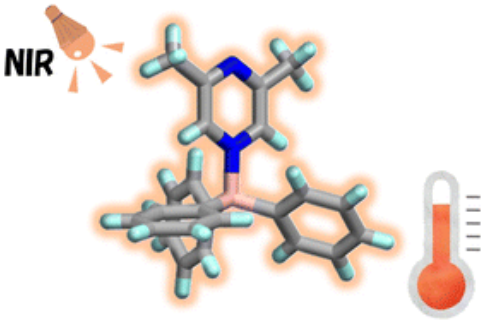
Chem. Eur. J., **2025**, e202500069. DOI: https://doi.org/10.1002/chem.202500069



(12) Photochromism and Efficient Photothermal Conversion of B←N Lewis Adducts Induced by Intramolecular Electron Transfer

Soutaro Kusumoto*, Takuma Mio, Kenta Rakumitsu, Masaya Shimabukuro, Mamiko Kobayashi, Tomoya Fukui, Nobutsugu Hamamoto, Toshiharu Ishizaki, Yang Kim, Yoshihiro Koide*

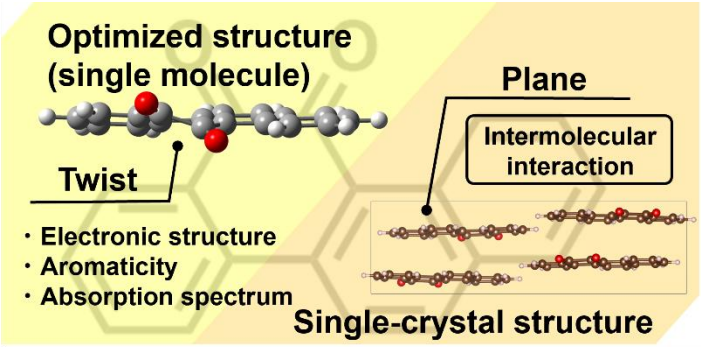
J. Mater. Chem. C, **2025**, 13, 3408-3413. DOI: https://doi.org/10.1039/d4tc03640a



(11) Theoretical and Experimental Studies on the Effect of the 1,2-Diketone Group on Geometry Distortion for Phenacene-type Polycyclic Aromatic Compounds

Nobutsugu Hamamoto,* Kenta Rakumitsu, Sotaro Kusumoto, Akihiro Yokoyama, Makoto Inokuchi

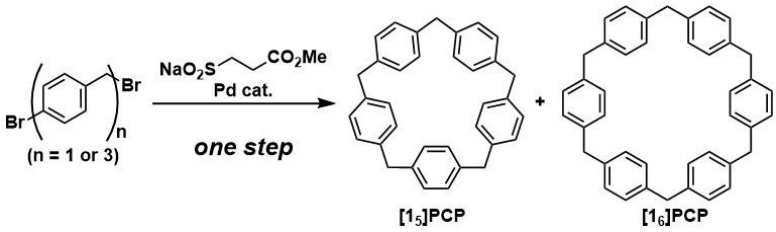
Bull. Chem. Soc. Jpn., **2024**, 97, uoae097. DOI: https://doi.org/10.1093/bulcsj/uoae097



(10) One-step synthesis of [1_5]paracyclophane and [1_6]paracyclophane *via* Pd-catalyzed C(sp^2)–C(sp^3) coupling and the cyclohexane-encapsulating crystal structure of [1_6]paracyclophane

Kenta Rakumitsu,* Daichi Takahashi, Sotaro Kusumoto, Akihiro Yokoyama*

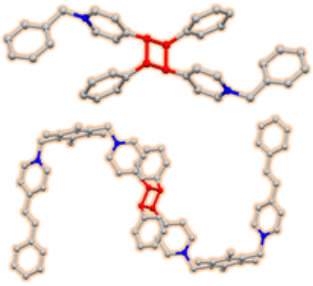
Chem. Lett., **2024**, 53, upae184. DOI: https://doi.org/10.1093/chemle/upae184



(9) Photosalient Effect and Photodimerization of Mono- and Dicationic Organic Salts Incorporated in 4-Styrylpyridine

Sotaro Kusumoto,* Kaede Wakabayashi, Kenta Rakumitsu, Yang Kim, Yoshihiro Koide*

CrystEngComm, **2024**, 26, 3791-3794. DOI: https://doi.org/10.1039/D4CE00538D



(8) Photo- and Stress-induced Bending of (E)-1,2-Bis(pyridinium-4-yl)ethene Dinitrate Crystals

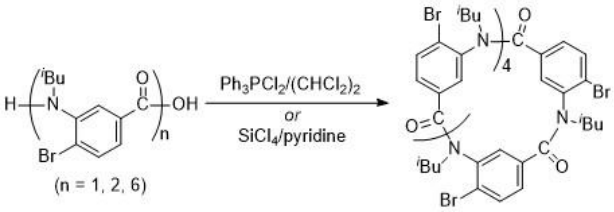
Sotaro Kusumoto,* Kaede Wakabayashi, Kenta Rakumitsu, Jack Harrowdield, Yang Kim, Yoshihiro Koide*

Chem. Eur. J., **2024**, 30, e202401564. DOI: https://doi.org/10.1002/chem.202401564

(7) Photodimerization and photosalient effects of 4-styrypyridine cocrystals using aromatic polycarboxylic acids as hydrogen bonding templates

Akihiro Yokoyama,* Ayaka Chino, Kenta Rakumitsu

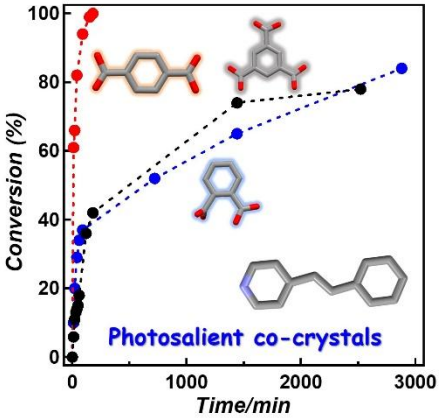
Chem. Pharm. Bull., **2024**, 7, 294-297. DOI: https://doi.org/10.1248/cpb.c24-00023



(6) Photodimerization and photosalient effects of 4-styrypyridine cocrystals using aromatic polycarboxylic acids as hydrogen bonding templates

Sotaro Kusumoto,* Kei Sato, Kenta Rakumitsu, Yang Kim, Yoshihiro Koide*

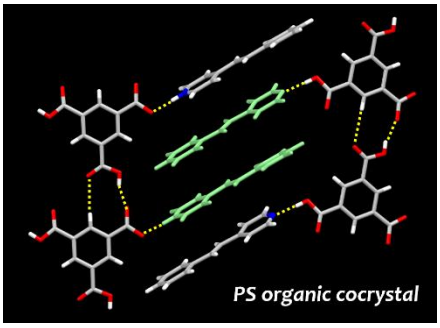
Cryst. Growth & Des., **2023**, 23, 8972-8977. DOI: https://doi.org/10.1021/acs.cgd.3c01014



(5) Photosalient ionic cocrystal composed of trimesic acid and 4-styrylpyridine

Sotaro Kusumoto,* Kei Sato, Kouki Muraie, Shunya Masuda, Kenta Rakumitsu, Yang Kim, Yoshihiro Koide*

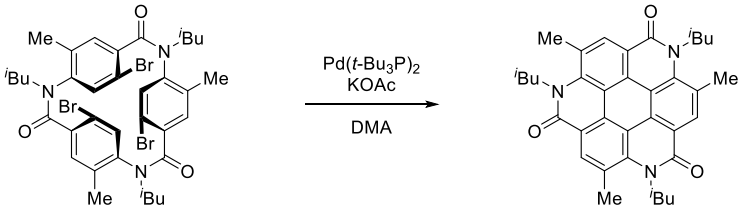
CrystEngComm, **2023**, *25*, 909-912. DOI: https://doi.org/10.1039/D2CE01592G



(4) Synthesis, crystal structure, and properties of methyl-substituted coronene amide analogue

Kenta Rakumitsu, Miho Fujii, Sotaro Kusumoto, Shoko Kikkawa, Isao Azumaya, Akihiro Yokoyama*

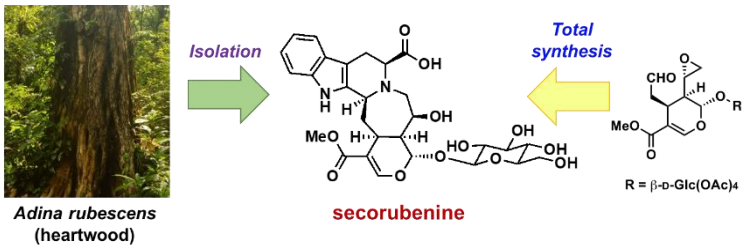
RSC Adv., **2022**, 12, 26411-26417. DOI: https://doi.org/10.1039/D2RA04035B



(3) Secorubenine, a Monoterpenoid Indole Alkaloid Glycoside from Adina rubescens: Isolation, Structure Elucidation, and Enantioselective Total Synthesis

Nanako Nakashima, Jukiya Sakamoto, Kenta Rakumitsu, Mariko Kitajima, L. D. Juliawaty, Hayato Ishikawa*

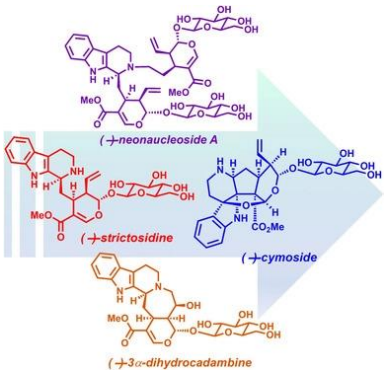
Chem. Pharm. Bull., **2022**, *70*, 187-191. DOI: https://doi.org/10.1248/cpb.c21-00931



(2) Total Syntheses of (-)-Strictosidine and Relate Indole Alkaloid Glycosides

Jukiya Sakamoto, Yuhei Umeda, Kenta Rakumitsu, Michinori Sumimoto, Hayato Ishikawa*

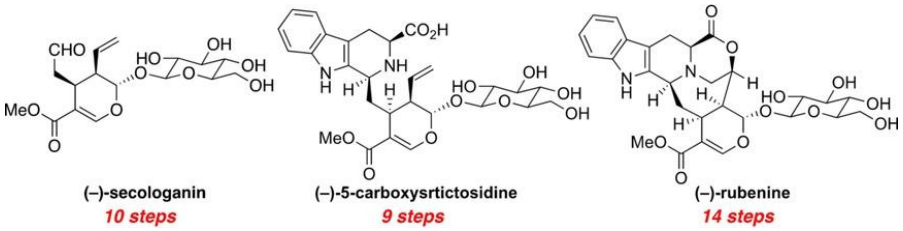
Angew. Chem. Int. Ed. **2020**, 59, 13414-13422. DOI: https://doi.org/10.1002/anie.202005748



(1) Total Syntheses of (-)-Secologanin, (-)-5-Carboxystrictosidine and (-)-Rubenine

Kenta Rakumitsu, Jukiya Sakamoto, Hayato Ishikawa*

Chem. Eur. J., **2019**, 25, 8996-9000. DOI: https://doi.org/10.1002/chem.201902073

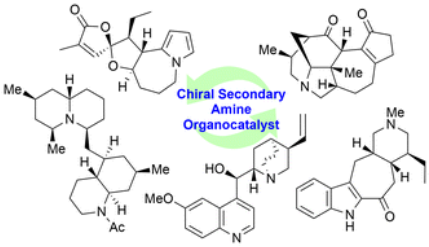


Reviews

(1) Recent advances in the total synthesis of alkaloids using chiral secondary amine organocatalysts

Yuta Nakashima, Kent Rakumitsu, Hayato Ishikawa*

Org. Biomol. Chem., **2024**, 22, 9319-9341. DOI: https://doi.org/10.1039/D4OB01590H



Honor, Award and Fellowships

(3) Promotion of Science Research Fellowship (DC2) for 2020

(2) Outstanding Poster Presentation Award, 9th. The Chemical Society of Japan Festa in 2019

(1) Best Poster Presentation Award, 29th Banyu-Fukuoka Symposium in 2019

Grant

(1) KAKENHI, Grant-in-Aid for Young Scientists (2023-2025)
「スマネンの新規合成法の開発およびアザスマネン類の合成」