

# Curriculum Vitae

## Kenta KATO Ph.D.

*Assistant Professor*

*Waseda Research Institute for Science and Engineering*

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## Education

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- Mar 2014 B.Sc., Nagoya University, Japan (Prof. Kenichiro Itami)
- Aug.–Nov. 2015 Visiting student (Prof. Marina A. Petrukhina, University at Albany, USA)
- Mar 2016 M.Sc. in Chemistry, Nagoya University, Japan (Prof. Kenichiro Itami)
- Mar 2019 Ph.D. in Chemistry, Nagoya University, Japan (Prof. Kenichiro Itami)  
Thesis title: Synthesis and Properties of Corannulene-based Nonplanar Aromatic Hydrocarbons

## Academic Career

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- Apr. 2019 Postdoctoral Researcher, Institute for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido University, Japan (Prof. Hajime Ito)
- Apr. 2020 Postdoctoral Researcher, Division of Applied Chemistry and Frontier Chemistry Center, Faculty of Engineering, Hokkaido University, Japan (Prof. Hajime Ito)
- Oct. 2020 Assistant Professor, Waseda Research Institute for Science and Engineering, Waseda University, Japan (Prof. Junichiro Yamaguchi)

## Publications

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- (1) **Synthesis, Properties, and Packing Structures of Corannulene-Based  $\pi$ -Systems Containing Heptagons**  
Kenta Kato, Yasutomo Segawa,\* Lawrence T. Scott, Kenichiro Itami\*  
*Chem. Asian J.* **2015**, *10*, 1635–1639. DOI: 10.1002/asia.201500560
- (2) **Phenanthro[9,10-*a*]corannulene by One-step Annulative  $\pi$ -Extension of Corannulene**  
Kenta Kato, Yasutomo Segawa,\* Kenichiro Itami\*  
*Can. J. Chem.* **2017**, *95*, 329–333. DOI: 10.1139/cjc-2016-0467
- (3) **A Quintuple [6]Helicene with a Corannulene Core as a  $C_5$ -Symmetric Propeller-Shaped  $\pi$ -System**  
Kenta Kato, Yasutomo Segawa,\* Lawrence T. Scott, Kenichiro Itami\*  
*Angew. Chem., Int. Ed.* **2018**, *57*, 1337–1341. DOI: 10.1002/anie.201711985 **Hot paper**  
*Highlighted on web site of the Cambridge Crystallographic Data Centre (CCDC); only two crystal data were highlighted of 20,004 data updated in 2018.*
- (4) **Synthesis and Structure of a Propeller-Shaped Polycyclic Aromatic Hydrocarbon Containing Seven-Membered Rings**  
Kazuya Kawai, Kenta Kato, Lingqing Peng, Yasutomo Segawa,\* Lawrence T. Scott, Kenichiro Itami\*  
*Org. Lett.* **2018**, *20*, 1932–1935. DOI: 10.1021/acs.orglett.8b00477
- (5) **Symmetric Multiple Carbohelicenes**  
Kenta Kato, Yasutomo Segawa,\* Kenichiro Itami\*  
*Synlett* **2019**, *30*, 3070–3077. DOI: 10.1055/s-0037-1610283
- (6) **Synthesis and Structural Features of Thiophene-fused Analogues of Warped Nanographene and Quintuple Helicene**  
Hsing-An Lin, Kenta Kato, Yasutomo Segawa\* Lawrence T. Scott, Kenichiro Itami\*  
*Chem. Sci.* **2019**, *10*, 2326–2330. DOI: 10.1039/C8SC04470H
- (7) **Two-Step Synthesis of a Red-Emissive Warped Nanographene Derivative *via* a Ten-Fold C–H Borylation**  
Kenta Kato, Hsing-An Lin, Motonobu Kuwayama, Mai Nagase, Yasutomo Segawa,\* Lawrence T. Scott, Kenichiro Itami\*  
*Chem. Sci.* **2019**, *10*, 9038–9041. DOI: 10.1039/C9SC03061A
- (8) **Six-Fold C–H Borylation of Hexa-*peri*-Hexabenzocoronene**  
Mai Nagase, Kenta Kato, Akiko Yagi, Yasutomo Segawa,\* Kenichiro Itami\*  
*Beilstein J. Org. Chem.* **2020**, *16*, 391–397. DOI: 10.3762/bjoc.16.37
- (9) **Double-Helix Supramolecular Nanofibers Assembled from Negatively Curved Nanographenes**  
Kenta Kato, Kiyofumi Takaba, Saori Maki-Yonekura, Nobuhiko Mitoma, Yusuke Nakanishi, Taishi Nishihara, Taito Hatakeyama, Takuma Kawada, Yuh Hijikata, Jenny Pirillo, Lawrence T. Scott, Koji Yonekura,\* Yasutomo Segawa,\* Kenichiro Itami\*  
*J. Am. Chem. Soc.* **2021**. DOI: 10.1021/jacs.1c00863  
*ChemRxiv* **2020**, DOI: 10.26434/chemrxiv.13270607.v1

## Oral Presentation

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- (1) **Synthesis, Properties, and Packing Structures of Corannulene-Based  $\pi$ -Systems Containing Heptagons**  
Kenta Kato, Yasutomo Segawa, Lawrence T. Scott, Kenichiro Itami.  
The 96<sup>th</sup> Chemical Society of Japan Annual Meeting  
Doshisha University, Kyoto, Japan, March 27, 2016.
- (2) **Synthesis and Structures of a Quintuple [6]helicene with a Corannulene Core**  
Kenta Kato, Yasutomo Segawa, Lawrence T. Scott, Kenichiro Itami.  
The 98<sup>th</sup> Chemical Society of Japan Annual Meeting  
Nihon University, Chiba, Japan, March 21, 2018.
- (3) **Synthesis and Structure of Corannulene-Based Quintuple [6]helicene**  
Kenta Kato, Yasutomo Segawa, Lawrence T. Scott, Kenichiro Itami.  
Enabling Excellence Japanese-European Workshops  
Nagoya University, Nagoya, Japan, May 28, 2018. *Student Presentation Award*
- (4) **Creation of Grossly Warped Nanographene**  
Kenta Kato  
The 9<sup>th</sup> Otsu Conference  
Otsu Prince Hotel, Shiga, Japan, October 22, 2018.
- (5) **One-dimensional Self-assembly of a Negatively Curved Aromatic Hydrocarbon**  
Kenta Kato, Yuh Hijikata, Jenny Pirillo, Taishi Nishihara, Yusuke Nakanishi, Yasutomo Segawa, Lawrence T. Scott, Kenichiro Itami  
The 99<sup>th</sup> Chemical Society of Japan Annual Meeting  
Konan University, Hyogo, Japan, March 18, 2019.
- (6) **Ten-fold Functionalization of Warped Nanographene through an Ir-catalyzed C–H Borylation**  
Kenta Kato, Hsing-An Lin, Yasutomo Segawa, Lawrence T. Scott, Kenichiro Itami.  
The 99<sup>th</sup> Chemical Society of Japan Annual Meeting  
Konan University, Hyogo, Japan, March 18, 2019.
- (7) **Gold(I) Complexes Exhibiting Both Photo- and Thermosensitive Effect**  
Kenta Kato  
Ace Meeting Online  
Virtual, May 2, 2020.

## Awards, Honor and Fellowships

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- (1) Japan Society for the Promotion of Science Research Fellowship for Young Scientists (DC) for 2017
- (2) ISNA'17 Poster Award, 17th International Symposium on Novel Aromatic Compounds in 2017
- (3) Chemical Society of Japan Student Presentation Award 2018
- (4) Poster Award, 29th Symposium on Physical Organic Chemistry in 2018
- (5) Selected as the 9<sup>th</sup> Otsu Conference Fellow in 2018
- (6) ISNA'18 Poster Award, 18th International Symposium on Novel Aromatic Compounds in 2019
- (7) Japan Society for the Promotion of Science Research Fellowship for Young Scientists (PD) for 2020