

長谷川 慎吾 (はせがわ しんご)  
横浜国立大学 大学院工学研究院 助教



[学歴]

2017年3月 京都大学理学部化学科 卒業 (指導教員：林重彦教授)

2019年3月 東京大学大学院理学系研究科化学専攻 修士課程 修了  
(指導教員：佃達哉教授)

2022年3月 東京大学大学院理学系研究科化学専攻 博士課程 修了  
(指導教員：佃達哉教授) 博士(理学) 取得

[職歴]

2019年4月 日本学術振興会特別研究員(DC1)(東京大学 佃達哉 研究室)

2022年4月 横浜国立大学大学院工学研究院 助教(本倉健 研究室)(現職)

[専門・研究分野]

物理化学・クラスター化学・触媒化学

[論文]

14. Ken Motokura, Yukina Nakamura, Moe Takabatake, Kenta Suzuki, **Shingo Hasegawa**, "Direct alkylation of benzene with branched alkanes using solid acids: Unexpected product selectivity based on the tertiary carbon position", *Catal. Today* **2024**, *425*, 114363.
13. **Shingo Hasegawa**, Keisuke Nakamura, Kosuke Soga, Kei Usui, Yuichi Manaka, Ken Motokura, "Concerted Hydrosilylation Catalysis by Silica-Immobilized Cyclic Carbonates and Surface Silanols", *JACS Au* **2023**, *3*, 2692-2697.
12. Satoshi Masaki, Hiroko Ariga-Miwa, Takashi U. Ito, Takefumi Yoshida, **Shingo Hasegawa**, Yukina Nakamura, Shunta Tokutake, Moe Takabatake, Koichi Shimomura, Wang-Jae Chun, Yuichi Manaka, Ken Motokura, "Pd Nanoparticles on the Outer Surface of Microporous Aluminosilicates for the Direct Alkylation of Benzenes using Alkanes", *ACS Catal.* **2023**, *13*, 12281-12287.
11. Ken Motokura, Kyosuke Gomi, Kyogo Maeda, Shunichi Sakai, **Shingo Hasegawa**, Wang-Jae Chun, Yuichi Manaka, "Silica-Supported Cu Complex Catalysis for Chan-Evans-Lam Coupling Reaction between Aniline and Phenylboronic Acid", *J. Jpn. Petrol. Inst.* **2023**, *66*, 171-179.
10. Ken Motokura, Ayaka Mizuno, **Shingo Hasegawa**, Masayuki Nambo, Moe Takabatake, Kenta Suzuki, Yuichi Manaka, Yohei Uemura, Shuntaro Tsubaki, Wang-Jae Chun, "In Situ Formation of Ru-Sn Bimetallic Particles for Non-Oxidative Coupling of Methane", *J. Phys. Chem. C* **2023**, *127*, 15185-15194.
9. Zhaozhan Wang, **Shingo Hasegawa**, Ken Motokura, Shaoping Kuang, Yong Yang, "A Single-Atom Pd Catalyst Anchored on a Porous Organic Polymer for Highly Efficient Telomerization of 1,3-Butadiene with Methanol", *Ind. Eng. Chem. Res.* **2023**, *62*, 3151-3156.

8. **Shingo Hasegawa**, Shinya Masuda, Shinjiro Takano, Koji Harano, Jun Kikkawa, and Tatsuya Tsukuda, “Synergistically Activated Pd Atom in Polymer-Stabilized Au<sub>23</sub>Pd<sub>1</sub> Cluster”, *ACS Nano* **2022**, *16*, 16932-16940.
7. **Shingo Hasegawa**, Shinya Masuda, Shinjiro Takano, Koji Harano, and Tatsuya Tsukuda, “Polymer-Stabilized Au<sub>38</sub> Cluster: Atomically Precise Synthesis by Digestive Ripening and Characterization of Atomic Structure and Oxidation Catalysis”, *ACS Catal.* **2022**, *12*, 6550-6558.
6. **Shingo Hasegawa**, Shinjiro Takano, Koji Harano, and Tatsuya Tsukuda, “New Magic Au<sub>24</sub> Cluster Stabilized by PVP: Selective Formation, Atomic Structure, and Oxidation Catalysis”, *JACS Au* **2021**, *1*, 660-668.
5. **Shingo Hasegawa** and Tatsuya Tsukuda, “Exploring Novel Catalysis Using Polymer-Stabilized Metal Clusters”, *Bull. Chem. Soc. Jpn.* **2021**, *94*, 1036-1044.
4. Atsushi Matsuo, **Shingo Hasegawa**, Shinjiro Takano, and Tatsuya Tsukuda, “Electron-Rich Gold Clusters Stabilized by Polyvinylpyridines as Robust and Active Oxidation Catalysts”, *Langmuir* **2020**, *36*, 7844-7849.
3. Shinjiro Takano, **Shingo Hasegawa**, Megumi Suyama, and Tatsuya Tsukuda, “Hydride Doping of Chemically Modified Gold-Based Superatoms”, *Acc. Chem. Res.* **2018**, *51*, 3074-3083.
2. **Shingo Hasegawa**, Shinjiro Takano, Seiji Yamazoe, and Tatsuya Tsukuda, “Prominent Hydrogenation Catalysis of a PVP-Stabilized Au<sub>34</sub> Superatom Provided by Doping a Single Rh Atom”, *Chem. Commun.* **2018**, *54*, 5915-5918.
1. Shun Hayashi, Ryo Ishida, **Shingo Hasegawa**, Seiji Yamazoe, and Tatsuya Tsukuda, “Doping a Single Palladium Atom into Gold Superatoms Stabilized by PVP: Emergence of Hydrogenation Catalysis”, *Top. Catal.* **2018**, *61*, 136–141.

[受賞歴]

- 2018年3月 触媒学会 第121回触媒討論会「学生ポスター賞」  
2018年5月 ナノ学会 第16回大会「若手優秀ポスター賞」  
2020年9月 触媒学会 第126回触媒討論会「学生ポスター賞」  
2022年4月 日本化学会 第102春季年会「学生講演賞」