



Masaya SAKAKIBARA

Department of Chemistry, The University of Tokyo

Ph.D. course student, 3rd year

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Birth Date: May 15, 1997; Ibaraki, Japan

Education :

2020 B.S. in Department of Chemistry, Faculty of Science, The University of Tokyo (Professor Eiichi Nakamura)

2022 M.S. in Department of Chemistry, Faculty of Science, The University of Tokyo (Professor Eiichi Nakamura)

Major Research Interest :

Exploration of atomistic structural dynamics of small clusters in crystallization or chemical reaction through high-resolution electron microscopic observation.

Research Experience :

2020-2022 TAKUETSU Research Assistant, The Forefront Physics and Mathematics Program to Drive Transformation, The University of Tokyo (Professor Eiichi Nakamura, Professor Makiko Sasada)

2022-present Japan Society for the Promotion of Science Research Fellowship for Young Scientists JSPS DC1 (Professor Eiichi Nakamura)

Awards and honors :

Best Poster Award at the 77th Annual Meeting of the Japanese Society of Microscopy (The Japanese Society of Microscopy, 2021)

Poster Prize at the 11th Subway Seminar (2021)

Excellence Award at the 63rd Science and Technology Film/Video Festival (2022)

Best Discussion Award at the 62nd Tokai Young Ceramist Meeting (The Ceramic Society of Japan Tokai Branch, 2022)

Student Poster Award at the 51st Japan Conference on Crystal Growth (The Japanese Association for Crystal Growth, 2022)

Outstanding Presentation Award at the Forum for Graduate School Education Reform 2022 (Tohoku University, 2022)

Student Best Presentation Award at the 79th Annual Meeting of the Japanese Society of Microscopy (The Japanese Society of Microscopy, 2023)

JACG Best Presentation Award at the 52nd Japan Conference on Crystal Growth (The Japanese Association for Crystal Growth, 2023)

JSPS HOPE fellow at the 15th HOPE Meeting (Japan Society for the Promotion of Science, 2024)

Publications :

1. Capturing the Moment of Emergence of Crystal Nucleus from Disorder, Takayuki Nakamuro, Masaya Sakakibara, Hiroki Nada, Koji Harano, Eiichi Nakamura*, *J. Am. Chem. Soc.* **2021**, *143*, 1763-1767. (Highlighted in *JACS Spotlights*, *J. Am. Chem. Soc.* **2021**, *143*, 1681-1682.)
2. Cinematographic Recording of a Metastable Floating Island in Two- and Three-Dimensional Crystal Growth, Masaya Sakakibara, Hiroki Nada, Takayuki Nakamuro*, Eiichi Nakamura*, *ACS Cent. Sci.* **2022**, *8*, 1704-1710.
3. Unveiling a crystal's entropy of disorder via electron diffraction: A statistical mechanics approach, Dongxin Liu, Oren Elishav, Jiarui Fu, Masaya Sakakibara, Kaoru Yamanouchi, Barak Hirshberg*, Takayuki Nakamuro*, Eiichi Nakamura*, *arXiv*, arXiv:2402.04738.
4. 「塩化ナトリウムの結晶化のしくみ」 榊原雅也, 中室貴幸, 中村栄一, *化学と教育*, **2024**, *72*, 46-49.
5. Kinetic Exploration of Nanoscale Polymorphs through Interface Energy Adjustment, Masaya Sakakibara, Takayuki Nakamuro*, Eiichi Nakamura*, *ChemRxiv*, 10.26434/chemrxiv-2024-ms4t7

Invited Talks :

1. Masaya Sakakibara, Takayuki Nakamuro, Eiichi Nakamura, “Seeing is believing” Surface Catalysis in Crystal Nucleation and Epitaxy”, 20th International Conference on Crystal Growth and Epitaxy, 105, Naples, August 2023

2. Masaya Sakakibara, Takayuki Nakamuro, “Visualization and Quantitative Analyses of Molecular Dynamics on Crystal Surfaces by Transmission Electron Microscopy”, Workshop for developments in in-situ observation and theory in phase transition dynamics at crystal surface, 2, Hokkaido, January 2024
3. Masaya Sakakibara, “Exploring the non-equilibrium dynamics in crystallization with atomic-resolution electron microscopy”, Japan Geoscience Union Meeting 2024, Chiba, May 2024