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Degree: Doctor of Philosophy
(Engineering)

Dissertation:

Molecular Dynamics Study of Thermal Transport Characteristics
Due to Surfactant Adsorption at Solid-Liquid Interfaces

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Educational Background:

2010.9 ~ 2014.7 Department of Chemical Engineering
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2014.9 ~ 2017.7 Department of Chemical Engineering
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2017.12 ~ 2018.3 Institute of Fluid Science, Tohoku University
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Work/Professional Experience:

2018.10~2021.3 RA, Molecular Heat Transfer Lab,
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2021.4 ~ Ph.D., Academic Researcher, Quantum Nanoscale Flow
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Publication papers while in doctoral course

- [1] [Y. Guo](#), D. Surblys, Y. Kawagoe, H. Matsubara, X. Liu, T. Ohara, [[A molecular dynamics study on the effect of surfactant adsorption on heat transfer at a solid-liquid interface](#)] , 『International Journal of Heat and Mass Transfer』 . Vol. 135, pp. 115-123. 2019
- [2] [Y. Guo](#), D. Surblys, Y. Kawagoe, H. Matsubara, T. Ohara, [[A molecular dynamics study of heat transfer over an ultra-thin liquid film with surfactant between solid surfaces](#)] , 『Journal of Applied Physics』 . Vol. 126, pp. 185302. 2019.
- [3] [Y. Guo](#), D. Surblys, Y. Kawagoe, H. Matsubara, T. Ohara, [[Molecular dynamics study on the effect of long-chain surfactant adsorption on interfacial heat transfer between polymer liquid and silica surface](#)] . 『The Journal of Physical Chemistry C』 . Vol. 124, pp. 27558-27570. 2020.
- [4] [Y. Guo](#), D. Surblys, Y. H. Matsubara, T. Ohara, [[A Molecular Dynamics Study of the Effect of Functional Groups and Side Chain on Adsorption of Alcoholic Surfactant and Interfacial Thermal Transport](#)] . 『Journal of Molecular Liquid』 . 2021. 116243

Presentation at international conference

- [1] [Y. Guo](#), D. Surblys, Y. Kawagoe, H. Matsubara, X. Liu, T. Ohara, [A study of the surfactant adsorption effect at the solid surface on the interfacial thermal transfer] , 『7th Asian Symposium on Computational Heat Transfer and Fluid Flow-2019』 , Tokyo, Japan, September, 2019

[2] Y. Guo, D. Surblys, Y. Kawagoe, H. Matsubara, X. Liu, T. Ohara, 「Molecular dynamics study on thermal boundary conductance at solid-liquid interfaces with adsorbed surfactant」, 『The 12th Asian Thermophysical Properties Conference』, Xi'an, China, October, 2019

Presentation at Japanese conference

[1] 郭玉婷, D. Surblys, 川越 吉晃, 松原 裕樹, X. Liu, 小原 拓, 「[界面活性剤吸着が固液界面の熱輸送に及ぼす影響に関する分子動力学的研究](#)」, 『第 32 回数値流体力学シンポジウム』, 東京, 2018 年 12 月

[2] 郭玉婷, D. Surblys, 川越 吉晃, 松原 裕樹, 小原 拓, 「固体壁間に吸着する界面活性剤による接触熱抵抗低減に関する分子動力学的研究」, 『第 57 回日本伝熱シンポジウム』, 金沢, 2020 年 6 月

[3] 鮑 允皓, 松原 裕樹, 川越 吉晃, D. Surblys, 郭玉婷, 小原 拓, 「固液界面熱輸送に及ぼす界面吸着分子の影響に関する分子動力学解析」, 『第 57 回日本伝熱シンポジウム』, 金沢, 2020 年 6 月

[4] 李 一凝, D. Surblys, 松原 裕樹, 川越 吉晃, 郭玉婷, 小原 拓, 「固液界面での界面熱コンダクタンスに対する表面粗さと液体分子長の影響に関する分子動力学研究」, 『第 57 回日本伝熱シンポジウム』, 金沢, 2020 年 6 月

Graduation photo

