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**TOKUNAGA Atsushi**

Organization	Mechanical Engineering
Position	Assistant Professor
Academic Title	Doctor(Engineering)
Research Fields	Thermodynamics, Computational Mechanics

### << Research Subjects >>

1. [Study on Heat and Mass Transport Phenomena at Solid-Liquid-Vapor interface](#)
2. [Development of Micro-structured Surface with Hydrophobic and Hydrophilic Patterns](#)

### << Academic Activities >>

#### Papers and Notes

1. [Atsushi TOKUNAGA, Gyoko NAGAYAMA, Takaharu TSURUTA : "Non-Equilibrium Transport Phenomena on Liquid Surface and Energy Accommodation Coefficients of Reflecting Molecules", TRANSACTIONS OF THE JAPAN SOCIETY OF MECHANICAL ENGINEERS Series B, Vol.77, No.774, pp.324-333 \(2011\)](#)
2. [Atsushi TOKUNAGA, Gyoko NAGAYAMA, Takaharu TSURUTA : "Study on the Inverted Temperature Profile Based on Non-Equilibrium Molecular Dynamics", TRANSACTIONS OF THE JAPAN SOCIETY OF MECHANICAL ENGINEERS Series B, Vol.76, No.771, pp.1701-1708 \(2010\)](#)
3. [Gyoko Nagayama, Masako Kawagoe, Atsushi Tokunaga and Takaharu Tsuruta : "On the evaporation rate of ultra thin liquid film at the nanostructured surface: a molecular dynamics study", International Journal of Thermal Sciences, Vol. 49, No.1, pp.59-66 \(2009\)](#)

#### Presentations

1. [Atsushi Tokunaga, Masaki Mizutani, Gyoko Nakayama, Takaharu Tsuruta: "Effect of Micro-structured Surface on Dropwise Condensation Heat Transfer", Proceedings of ASME 2013 11th International Conference on Nanochannels, Microchannels and Minichannels, 2013, ICNMM2013-73200 \(8pages\), Sapporo \(Japan\), June 16-19 \(2013\)](#)
2. [Atsushi Tokunaga, Shota Yamawaki, Gyoko Nagayama and Takaharu Tsuruta: "Condensation Heat Transfer on A Micro-structured Surface with Hydrophobic and Hydrophilic Patterns", Proceedings of the Eighth KSME-JSME Thermal and Fluids Engineering Conference, CD-ROM, FR11-013 \(2 pages\), Incheon \(Korea\), Mar. 18-21 \(2012\)](#)
3. [Atsushi Tokunaga, Shota Yamawaki, Gyoko Nagayama and Takaharu Tsuruta: "Effect of Non-condensable Gases on Interface Resistance in Microscopic Dropwise Condensation", Proceedings of the fourth International Conference on Heat Transfer and Fluid Flow in Microscale, CD-ROM, HTFFM-IV-118 \(7 pages\), Fukuoka \(Japan\), Sep. 4-9 \(2011\)](#)
4. [Atsushi Tokunaga, Gyoko Nagayama and Takaharu Tsuruta : "A Study on Inverted Temperature Profile Based on Nonequilibrium Molecular Dynamics Simulation", Proceedings of The 14th International Heat Transfer Conference, CD-ROM, Paper No. IHTC14-22801\(7pages\), Washington DC \(USA\), Aug. 8-13 \(2010\)](#)
5. [Takaharu Tsuruta, Atsushi Tokunaga, and Gyoko Nagayama : "Molecular Boundary Conditions and Accommodation Coefficient on Non-equilibrium Liquid Surface", Proceedings of The 27th International Symposium on Rarefied Gas Dynamics, ID 163\(7pages\), San Francisco \(USA\), Jul. 10-15 \(2010\)](#)
6. [Atsushi Tokunaga, Gyoko Nagayama and Takaharu Tsuruta : "Enhancement Condensation Heat Transfer in Micro Systems", Proceedings of The ASME 2009 InterPACK Conference, CD-ROM, Paper No. IPACK2009-89234\(7 pages\), San Francisco \(USA\), Jul. 19-23 \(2009\)](#)
7. [Atsushi Tokunaga, Gyoko Nagayama and Takaharu Tsuruta : "Microscopic Evaluation of Condensation Coefficient in Dropwise Condensation Heat Transfer", Proceedings of The 2nd International Forum on Heat Transfer, p.41 CD-ROM\(2 pages\), Tokyo \(Japan\), Sep. 17-19 \(2008\)](#)

