Curriculum Vitae

Yuji Nagasaka

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Professor Yuji Nagasaka received his Ph.D. degree in Mechanical Engineering from Keio University in 1983, working with Prof. Akira Nagashima. While he served as assistant in Keio University, he joined Professor Joseph Kerstin's research group (precise measurement of transport properties of fluids) at Brown University as research associate from 1981 to 1982. He was appointed as Associate Professor in Department of Mechanical Engineering at Keio University in 1992 and was promoted to full professor in Department of System Design Engineering at Keio University in 1998.

He has very broad research interests in the development of measurement and sensing techniques of wide variety of thermophysical properties of fluids and solids especially in micro and nanoscale. He has been dealing with the thermophysical properties such as thermal conductivity, thermal diffusivity, viscosity, surface tension, mass diffusion coefficient, Soret coefficient and emissivity. The substances covered are not only normal gases and liquids but high temperature melts like molten salts and molten silicon and also bio fluid such as whole human blood. The examples for solid materials are thin films, superconducting materials at low temperatures and functionally graded materials at high temperatures.

He is the author or coauthor of ten book chapters, over 160 refereed journal publications, 620 papers published in conference proceedings and more than 85 review articles. He served as a member of IUPAC Subcommittee on Transport Properties of Commission I.2 Thermodynamics in 1991 - 2000 and is advisory editorial board of High Temperatures - High Pressures thermophysical properties research since 2000. From 2020, he is acting as Senior Editor of International Journal of Thermophysics.

Degree:

1977 B.S. Keio University, Mechanical Engineering
1979 M.S. Keio University, Mechanical Engineering
1983 Ph.D. Keio University, Mechanical Engineering
Title of Ph.D. Theses, "Precise Measurements of the Thermal Conductivity of Electrically Conducting Liquids by the Transient Hot-Wire Method"

Positions at Keio University :

1979 Instructor
1986 Assistant Professor
1992 Associate Professor

1998 Professor
2020 Professor Emeritus

Positions at Other Institutions and Organizations :

1981-1982 Research Associate, Brown University, USA
1995 Part-time Assistant Professor, Hokkaido University
1998 Part-time Assistant Professor, Institute for Chemical Reaction Science, Tohoku University
1999 Part-time Assistant Professor, Nagoya University
2000 Part-time Assistant Professor, Institute of Advanced Material Study, Kyushu University
2002 Part-time Assistant Professor, Institute of Advanced Material Study, Kyushu University
2002 - 2006 Adjunct Professor, Xi'an Jiaotong University, China
2004, 2006 Part-time Assistant Professor, Institute of Advanced Material Study, Kyushu University

Scientific Awards :

1990 Japan Society of Mechanical Engineers Medal for the Research Encouragement
1991 Japan Society of Mechanical Engineers Medal for the Best Papers
1994 Heat Transfer Society Awards of Japan for Scientific Contributions
2003 Japan Society of Mechanical Engineers Certificate of Merit for Thermal Engineering Contribution
2004 Fellow of Japan Society of Mechanical Engineers
2004 Japan Society of Mechanical Engineers Thermal Engineering Achievement Award
2005 Heat Transfer Society Awards of Japan for the Best Paper
2007 Japan Society of Mechanical Engineers Medal for the Best Papers
2007 Best Paper Award of the Japan Society Thermophysical Properties
2009 Best Paper Award of the Society for Chemical Engineers Japan 2008
2010 Significant Contribution Award, 9th Asian Thermophysical Properties Conference
2011 Japan Society of Mechanical Engineers Medal for the Best Papers
2014 Outstanding Achievement Award of the Japan Society of Thermophysical Properties
2015 Komo Industrial Achievement Award of Tanikawa Thermal Technology Achievement Fund
2019 Japan Society of Mechanical Engineers Thermal Engineering Award for Outstanding Academic Contribution

Service to Government or Professional Organizations :

1991 - 2000 Member of IUPAC Subcommittee on Transport Properties of Commission I.2 Thermodynamics
2000 - Advisory editorial board, High Temperatures - High Pressures thermophysical properties research
2006 - 2014 Member of Science Council of Japan

2008 - 2010 Vice President of the Japan Society of Thermophysical Properties
2012 - 2015 Senior Program Officer of Research Center for Science Systems, Japan Society for Promotion of Science (JSPS)
2013 President of the Japan Society of Thermophysical Properties
2016 Vice President of the Heat Transfer Society of Japan
2017 - Member of the Japan Science and Technology Agency (JST) Committee of the National Research and Development Agency Council
2020 - Senior Editor, International Journal of Thermophysics (Springer-Nature)

Representative Publications :

A. Books and Book Chapters

10. "Nano/Microscale Thermophysical Properties Handbook", ed. Japan Society of Thermophysical Properties, Yokendo, Tokyo, (2014).
9. "Transport Properties of Fluids: Advances in Transport Properties - Experimental Thermodynamics IX", eds. M. J. Assael, A. R. H. Goodwin, V. Vesovic and Sir W. A. Wakeham, RSC Publishing, (2014).
8. "Problems in Thermodynamics", The Japan Society of Mechanical Engineers, (2012).
7. "Thermophysical Properties Handbook (New Edition)", ed. Japan Society of Thermophysical Properties, Yokendo, Tokyo , (2008).
6. "Thermodynamics", The Japan Society of Mechanical Engineers, (2002).
5. "Optical Measuring Techniques for Thermophysical Properties" in Recent Development of Heat Transfer Engineering Vol. 3, Yokendo, Tokyo, (2000).
4. "Handbook of Laser Measurement Techniques", Maruzen, Tokyo, (1993).
3. "Thermophysical Properties Measurement Methods - Their development and engineering applications - ", ed. The Japan Society of Mechanical Engineers, Yokendo, Tokyo, (1991).
2. "Experimental Thermodynamics Vol. III: The Measurement of Transport Properties of Fluids", eds. W. A. Wakeham, A. Nagashima and J. V. Sengers, Blackwell Scientific, Oxford, (1991).
1. "Thermophysical Properties Handbook", ed. Japan Society of Thermophysical Properties, Yokendo, Tokyo, (1990).

B. Refereed Journal Papers

162. Fujikawa, M., Sato, Y., Fujita, M. and Nagasaka, Y., “Mutual diffusion coefficient of concentrated trehalose aqueous solutions including supercooled regions measured by the Soret forced Rayleigh scattering method”, *J. Mol. Liq.*, **311**, 113346 (8pages), (2020) doi: 10.1016/j.molliq.2020.113346.
161. Kamata, M., Takaba, Y., Taguchi. Y. and Nagasaka, Y., "Rapid and label-free sensing of intermolecular interactions using compact optical diffusion sensor", *International Journal of Heat and Mass Transfer*, **133**, 73-79, (2019) doi: 10.1016/j.ijheatmasstransfer.2018.12.088.
160. Eguchi, M., Taguchi. Y. and Nagasaka, Y., "Non-contact optical hand-held viscosity sensor with incident angle and irradiation timing controls", *Optics Express*, **26**(26), 34070-34080, (2018) doi: 10.1364/OE.26.034070.
159. Oikawa, H. and Nagasaka, Y., "Non-contact Concentration Sensing Technique of Aqueous Solutions of Glucose at Low Concentration Range - Development of Rotating

Half-wave Retarder Method with Two Probing Lasers for Detecting Small Optical Rotation -", *Japan Journal of Thermophysical Properties*, **32**(4), 157 - 164, (2018) doi: 10.2963/jjtp.32.157.

158. Tomioka, K., Ozeki, S., Tachikawa, S., Omura, T. and Nagasaka, Y., "Measurement of Low Thermal Conductivity using New Correction Method under Vacuum", *Japan Journal of Thermophysical Properties*, **32**(3), 104 -111., (2018) doi: 10.2963/jjtp.32.104.
157. Kamata, M., Taguchi. Y. and Nagasaka, Y., "Design of an optofluidic diffusion sensor by transient grating using dielectrophoresis", *Optics Express*, **26**(13), 16970 - 16983, (2018) doi:10.1364/OE.26.016970.
156. Matsuura, H. and Nagasaka, Y., "Development of measurement technique of mass diffusion coefficient of aqueous methanol solutions in polymer electrolyte membranes based on infrared Soret forced Rayleigh scattering method using single crystal diamond window in a sample cell", *Journal of Thermal Science and Technology*, **13**(1), JTST0015., (2018) doi.org/10.1299/jtst.2018jtst0015.
155. Eguchi, M., Taguchi, Y., and Nagasaka, Y., "Development of optical hand-held viscosity sensor for simple and quick in situ measurement", *Trans. JSME*, **84**(860), 17-00572/1-13, (2018) doi: 10.1299/transjsme.17-00572.
154. Matsuura, H. and Nagasaka, Y., "Soret forced Rayleigh scattering instrument for simultaneous detection of two- wavelength signals to measure Soret coefficient and thermodiffusion coefficient in ternary mixtures", *Rev. Sci. Instrum*., **89**, 024903, 11p, (2018) doi: 10.1063/1.5013292.
153. Kiuchi, Y., Taguchi, Y., and Nagasaka, Y., "Decay Time Control of Mass Diffusion in a Transient Grating using a Fringe-tunable Electrothermal Fresnel Mirror", *Journal of Thermal Science and Technology*, **12**(2), 17-00301/1-11, (2017) doi: 10.1299/jtst.2017jtst0027.
152. Murakami, Y., Goto, H., Taguchi, Y., and Nagasaka, Y., "Measurement of Out-of-Plane Thermal Conductivity of Epitaxial $YBa_2Cu_3O_{7-\delta}$ Thin Films in the Temperature Range from 10 K to 300 K by Photothermal Reflectance", *Int. J. Thermophys.*, **38**:160, 22p, (2017) doi:10.1007/s10765-017-2294-7.
151. Matsuura, H., and Nagasaka, Y., "Development of Measurement Technique for Soret Coefficient and Thermodiffusion Coefficient of Ternary Systems by Soret Forced Rayleigh Scattering Method with Two Probing Lasers of Different Wavelengths", *Japan Journal of Thermophysical Properties (Nestu Bussei)*, **31**(2), 89 - 96, (2017).
150. Seto, D., Nikka, R., Nishio, S., Taguchi, Y., Saiki, T., and Nagasaka, Y., "Nanoscale optical thermometry using a time-correlated single-photon counting in an illumination-collection mode", *Appl. Phys. Lett.*, **110**(3), 033109, (2017) doi:10.1063/1.4974451.
149. Kiuchi, Y., Taguchi, Y., and Nagasaka, Y., "Fringe-tunable electrothermal Fresnel mirror for use in compact and high-speed diffusion sensor", *Optics Express*, **25**(2), 758-767, (2017) doi:10.1364/OE.25.000758.
148. Tomioka, K., Tachikawa, S., Kawahara, K. and Nagasaka, Y., "Design and Measurement of Radiowave Transmissive Thermal Control Mirror", *J. Spacecrafts and Rockets*, **53**(6), 1043-1050, (2016) doi:10.2514/1.A33499.
147. Kamata, M., Yamada. K., Taguchi. Y. and Nagasaka, Y., "Development of Micro Optical Diffusion Sensor utilizing Laser-Induced Dielectrophoresis with Sputtered a-Si:H", *Japan Journal of Thermophysical Properties (Nestu Bussei)*, **30**(2), 74 - 79, (2016).
146. Fujiura, K., Nakamoto, Y., Taguchi, Y., Ohmura, R. and Nagasaka, Y., "Thermal conductivity measurements of semiclathrate hydrates and aqueous solutions of tetrabutylammonium bromide (TBAB) and tetrabutylammonium chloride (TBAC) by the transient hot-wire using parylene-coated probe", *Fluid Phase Equilibria*, **413**, 129 -

136, (2016) doi:10.1016/j.fluid.2015.09.024.

145. Matsuura, H., Iwaasa, S. and Nagasaka, Y., "Mass Diffusion Coefficient and Soret Coefficient of o-Dichlorobenzene Solutions of PCBM and [60]Fullerene by the Soret Forced Rayleigh Scattering Method", *J. Chem. Eng. Data*, **60**(12), 3621 - 3630, (2015) doi:10.1021/acs.jced.5b00609.
144. Matoba, Y., Taguchi, Y. and Nagasaka, Y., "Micro optical diffusion sensor using a comb-driven micro Fresnel mirror", *Opt. Express*, **23**, 477 - 483, (2015) doi: 10.1364/OE.23.000477.
143. Takiguchi, H. and Nagasaka, Y., "Development of Measurement Technique for Viscosity and Surface Tension with Near-Infrared Laser-induced Capillary Wave - Theoretical Analysis of Uncertainties caused by the Temperature Dependence of Surface Tension and Experimental Verification of the Effect on the Temperature Dependence of Surface Tension with Decanol Aqueous Solution between Surface Heating and Volume Heating - ", *Japan Journal of Thermophysical Properties (Nestu Bussei)*, **29**(2), 82 - 89, (2015).
142. Oya, A., Takiguchi, H. and Nagasaka, Y., "Development of pulsed laser Viscometer (Development of automatic high-speed measuring apparatus for viscosity by near-infrared laser-induced capillary wave method)", *Trans. JSME*, **80**(820), (2014) doi:10.1299/transjsme.2014tep0369.
141. Takagi, R., Tachikawa, S., Ohmura, T. and Nagasaka, Y., "Measurement and Estimation of High-Vacuum Effective Thermal Conductivity of Polyimide Foam in the Temperature Range from 160 K to 370 K for Outer Space Applications", *Int. J. Thermophys.*, **35**(2), 277-286, (2014) doi:10.1007/s10765-014-1605-5.
140. Nishimura, Y., Hasegawa, A. and Nagasaka, Y., "High-precision instrument for measuring the surface tension, viscosity and surface viscoelasticity of liquids using ripplon surface laser-light scattering with tunable wavelength selection", *Rev. Sci. Instrum.*, **85**, 044904, (2014).
139. Nitta, J., Taguchi, Y., Saiki, T. and Nagasaka, Y., "Numerical analysis of the temperature dependence of near-field polarization for nanoscale thermometry using a triple-tapered near-field optical fiber probe", *J. Opt.*, **16**, 035001, (2014).
138. Nagatomi, T., Taguchi, Y., Ohmura, R. and Nagasaka, Y., "Thermal Conductivity Measurement of TBAB Hydrate by the Transient Hot-Wire using Parylene-Coated Probe", *Trans. JSME*, **B79**(802), 1155-1163, (2013).
137. Ikeda, T., Ando, T., Taguchi, Y. and Nagasaka, Y., "Size effect of out-of-plane thermal conductivity of epitaxial $YBa_2Cu_3O_{7-\delta}$ thin films at room temperature measured by photothermal radiometry", *J. Appl. Phys.*, **113**, 183517, (2013).
136. Takiguchi, H. and Nagasaka, Y., "Development of Near-Infrared Laser-Induced Capillary Wave Method to Measure Viscosity and Surface Tension", *Trans. JSME*, **B79**(800), 690 - 700, (2013).
135. Fujii, T., Taguchi, Y., Saiki, T. and Nagasaka, Y., "Near-field fluorescence thermometry using highly efficient triple-tapered near-field optical fiber probe", *Rev. Sci. Instrum.*, **83**, 124901, 1-8, (2012).
134. Sakai, T., Hotta, J. and Nagasaka, Y., "Development of Measurement Technique for Mass Diffusion Coefficient of Methanol Aqueous Solutions in Polymer Electrolyte Membrane for Fuel Cell by Soret Forced Rayleigh Scattering", *Japan Journal of Thermophysical Properties (Nestu Bussei)*, **26**(4), 196 - 202, (2012).
133. Oka, T., Itani, K., Taguchi, Y. and Nagasaka, Y., "Development of Interferometic Excitation Device for Micro Optical Diffusion Sensor Using Laser-Induced Dielectrophoresis", *JMEMS*, **21**(2), 324 - 330, (2012).
132. Yamamoto, Y., Taguchi, Y. and Nagasaka, Y., "Study on Nanoscale Temperature

Distribution for the Patterning of Self-Assembled Monolayers Using Near-Field Photothermal Desorption", *J. Thermal Sci. and Tech.*, **6**(3), 436-448., (2011).

131. Fujii, T., Taguchi, Y., Saiki, T. and Nagasaka, Y., "A Fusion-spliced Near-Field Optical Fiber Probe Using Photonic Crystal Fiber for Nanoscale Thermometry Based on Fluorescence-Lifetime Measurement of Quantum Dots", *Sensors*, **11**(9), 8358-8369, (2011).
130. Nagano, H., Ohnishi, A. and Nagasaka, Y., "Development of a lightweight deployable/stowable radiator for interplanetary exploration", *Applied Thermal Engineering*, **31**, 3322-3331, (2011).
129. Masuda, H., Nagano, H., Ohnishi, A. and Nagasaka, Y., "Development of a simultaneous measurement method for thermoelectric properties with a film-type thermocouple sensor", *Japan Journal of Thermophysical Properties (Nestu Bussei)*, **25**(4), 187 - 193, (2011).
128. Itani, K., Taguchi, Y. and Nagasaka, Y., "Study on Micro Optical Diffusion Sensor Using Laser-Induced Dielectrophoresis (Preliminary Experiment of Optical Detection System for Integrated Micro Optical Device)", *Trans. JSME*, **B77**(779), 1567 - 1577, (2011).
127. Muramoto, Y. and Nagasaka, Y., "High-speed sensing of microliter-order whole- blood viscosity using laser-induced capillary wave", *J. Biorheology*, **25**(1), 43 - 51, (2011).
126. Itani, K., Ebisui, A., Taguchi, Y. and Nagasaka, Y., "Development of a micro optical diffusion sensor using laser-induced dielectrophoretic manipulation", *Heat Transfer - Asian Research*, **39**(5), 344 - 354, (2010).
125. Hosaka, S., Kasakake, T., Taguchi, Y. and Nagasaka, Y., "Development of Nanoscale Temperature Measurement Method by Polarized Near-field Light", *Trans. JSME,* **C76**(768), 1926-1928, (2010).
124. Abe, H., Nagamachi, R., Taguchi, Y. Nagasaka, Y., "Feasibility study on real-time monitoring by miniaturized optical viscosity sensor", *Trans. JSME,* **C76**(768), 1923-1925, (2010).
123. Muramoto, Y., Takahashi, N., Kamata, N., Nagasaka, Y., "Development of High Speed Sensing Technique for Blood Viscosity with Micro-Liter Sample Volume", *Trans. JSME,* **B76**(768), 1290-1296, (2010).
122. Itani, K., Ebisui, A., Taguchi, Y. and Nagasaka, Y., "Development of Micro Optical Diffusion Sensor using Laser Induced Dielectrophoretic Manipulation", *Japan Journal of Thermophysical Properties (Nestu Bussei),* **23**(4), 197-202, (2009).
121. Niwa, M., Ohta, Y. and Nagasaka, Y., "Mass Diffusion Coefficients of Cellulose Acetate Butyrate in Methyl Ethyl Ketone Solutions at Temperatures between (293 and 323) K and Mass Fractions from 0.05 to 0.60 Using the Soret Forced Rayleigh Scattering Method", *J. Chem. Eng. Data,* **54**, 2708-2714, (2009).
120. Taguchi, Y., Nagamachi, R. and Nagasaka, Y., "Micro Optical Viscosity Sensor for in situ Measurement Based on a Laser-Induced Capillary Wave", *J. Thermal Sci. and Tech.,* **4**(1), 99-108, (2009).
119. Taguchi, Y., Oka, T., Saiki, T. and Nagasaka, Y., "Development of Near-field Fluoresence Life-time Thermometry", *Nanoscale and Microscale Thermophysical Engineering,* **13**(2), 77-87, (2009).
118. Oki, K. and Nagasaka, Y., "Measurements of anisotropic surface properties of liquid films of azobenzene derivatives", *Colloids and Surfaces A: Physicochemical and Engineering Aspects,* **333**(1-3), 182-186, (2009).
117. Nagano, H., Ohnishi, A., Higuchi, K. and Nagasaka, Y., "Experimental Investigation of A Passive Deployable/Stowable Radiator", *J. Spacecraft and Rockets,* **46**(1), 185-190,

(2009).

116. Motosuke, M., Nagasaka, Y. and Honami, S., "Time-Resolved and Micro-Scale Measurement of Thermal Property for Intermolecular Dynamics Using an Infrared Laser", *J. Thermal Sci. and Tech.,* **3**(1), 124-132, (2008).
115. Motosuke, M. and Nagasaka, Y., "Real-Time Sensing of the Thermal Diffusivity for Dynamic Control of Anisotropic Heat Conduction of Liquid Crystals", *Int. J. Thermophys.,* **29**(6), 2025 - 2035, (2008).
114. Oki, K. and Nagasaka, Y., "Dynamic Observation of the Behavior of the Surface of Liquid Films of Polymer-Organic Solvent System by Ripplon Surface Laser-Light Method", *Japan Journal of Chemical Engineering (Kagaku Kogaku Ronbunshu),* **34**(6), 587-593, (2008).
113. Oki, K. and Nagasaka, Y., "Advances in Ripplon Surface Laser-Light Scattering Measurement for Highly Viscous Polymer-Solvent System", *Int. J. Thermophys.,* 1572-9567, (2008).
112. Taguchi, Y., Ebisui, A. and Nagasaka, Y., "Miniaturized optical viscosity sensor based on a laser-induced capillary wave", *J. Opt. A: Pure Appl. Opt.,* **10,** 044008/1-6, (2008).
111. Iwashima, H. and Nagasaka, Y., "Experimental study on in-situ viscosity measurement of milk fermenting to yogurt by laser-induced capillary wave method", *High Temperatures-High Pressures,* **B-73**(733), 51-60, (2008).
110. Jigami, T., Kobayashi, M., Taguchi, Y. and Nagasaka, Y., "Development of Nanoscale Temperature Measurement Technique Using Near-field Fluorescence", *Int. J. Thermophys.,* **28**(3), 968 - 979, (2008).
109. Nagasaka, Y. and Kobayashi, Y., "Effect of atmosphere on the surface tension and viscosity of molten $LiNbO_3$ measured using the surface laser-light scattering method", *J. Cryst. Growth*, **307**(1), 51 - 58, (2007).
108. Iwashima, H., Yabui, K. and Nagasaka, Y., "Viscosity and Surface Tension Measurement by Laser-induced Capillary Wave Method (Development of Technique for Solving Inverse Problem)", *Trans. JSME,* **B-73**(733), 1892-1898, (2007).
107. Nagano, H., Nagasaka, Y. , Ohnishi, A., Watanabe, K., Oikawa, Y. and Yamaguchi, K., "Design and Fabrication of a Passive Deployable/Stowable Radiator", *J. Aerospace*, 2006-01-2038, 104-114, (2006).
106. Nagano, H., Ohnishi, A., Nagasaka and Nagashima, A., "Study on a Reversible Thermal Panel for Spacecraft (Detailed Design Based on Parametric Studies and Experimental Verification)", *Heat Transfer – Asian Research*, **35**(7), 464-481, (2006).
105. Nagano, H., Ohnishi, A., Nagasaka, Y., Mori, Y. H. and Nagashima, A., "Proton Irradiation Effects on Thermophysical Properties of High-Thermal-Conductivity Graphite Sheet for Spacecraft Application", *Int. J. Thermophys.*, **27**(1), 114 - 125, (2006).
104. Nagano, H., Nagasaka, Y. and Ohnishi, A., "Simple Deployable Radiator with Autonomous Thermal Control Function", *J. Thermophys. Heat Transfer (AIAA)*, **20**(4), 856-864 (2006).
103. Yamamoto, Y. and Nagasaka, Y., "Development of the Soret Rayleigh Scattering Method for Measurement of Mass Diffusion Coefficient (2nd Report, Theoretical Analysis of Systematic Effect of Experimental Parameters)", *Trans. JSME,* **B-72**(715), 715-722 (2006).
102. Yamamoto, Y. and Nagasaka, Y., "Development of the Soret Rayleigh Scattering Method for Measurement of Mass Diffusion Coefficient (1st Report, Development of the Measurement System and Measurement of the Fullerene in Solution)", *Trans. JSME,* **B-72**(715), 709-714 (2006).
101. Oba, T., Kido, Yabui, K. and Nagasaka, Y., "Application of Laser-Induced Capillary

Wave for A New Viscosity Measurement Method (Theory and Experimental Apparatus for Measuring Wide Range of Viscosity", *Trans. JSME,* **B-72**(714), 428-433 (2006).

100. Motosuke, M., Nagasaka, Y. and Nagasihma, A., " Subsecond Measuring Technique for In-plane Thermal Diffusivity at Local Area by the Forced Rayleigh Scattering Method", *Int. J. Thermophys.*, **26**(4), 969 - 979, (2005).
99. Nagano, H., Ohnishi, A., Nagasaka, Y., Mori, Y. H. and Nagashima, A., " Study on a Reversible Thermal Panel for Spacecraft ", *Trans. JSME,* **B-71**(712), 2897-2995 (2005).
98. Nagano, H., Ohnishi, A., Nagasaka, Y. and Nagashima, A., "A Reversible Thermal Panel for Spacecraft Thermal Control (Evaluation of Effectiveness and Reliability of New Autonomous Thermal Control Device)", *Heat Transfer - Asian Research*, **34**(5), 350 – 367 (2005).
97. Taguchi, Y., Horiguchi, Y., Kobayashi, M., Saiki, T. and Nagasaka, Y., "Measurement Method for Nano-scale Thermophysical Properties Using Near-Field Optics (Application to Single-walled Carbon Nano-tubes)", *Trans. JSME,* **B-71**(712), 168-174 (2005).
96. Oba, T., Kido, Y. and Nagasaka, Y., " Development of Laser-Induced Capillary Wave Method for Viscosity Measurement Using Pulsed Carbon Dioxide Laser", *Int. J. Thermophys.*, **25**(5), 1461 - 1474, (2004).
95. Nagano, H., Ohnishi, A., Nagasaka, Y. and Nagashima, A., "Study on a Reversible Thermal Panel for Spacecraft (Evaluation of Efficiency and Reliability of New Autonomous Thermal Control Device)", *Trans. JSME*, **B-70**(696), 2117-2125, (2004).
94. Taguchi, Y., Horiguchi, Y., Kobayashi, M., Saiki, T. and Nagasaka, Y., "Development of Nanoscale thermal Properties Measurement Techniques by Using Near-Field Optics", *JSME Int. J*, Series **B-47**(3), 483-489 (2004).
93. Sano, A. and Nagasaka, Y., "Evaluation of the Thermophysical Properties of Functionally Graded Materials at High Temperatures by the Photothermal Radiometry", *Trans. JSME*, **B-70**(695), 1849-1855, (2004).
92. Motosuke, M., Nagasaka, Y. and Nagasihma, A., "Measurement of Dynamically Changing Thermal Diffusivity by the Forced Rayleigh Scattering Method (measurement of gelation process)", *Int. J. Thermophys.*, **25**(2), 519 - 531, (2004).
91. Taguchi, Y. and Nagasaka, Y., "Thermal Diffusivity Measurement of Isotropically Enriched 28-Si Single Crystal by Dynamic Grating Radiometry", *Int. J. Thermophys.*, **25**(2), 459 - 472, (2004).
90. Shimazaki, K., Ohnishi, A. and Nagasaka, Y., " Development of Spectral Selective Multilayer Film for a Variable Emittance Device and Its Radiation Properties Measurements", *Int. J. Thermophys.,* **24**(3), 757 - 769, (2003).
89. Shimazaki, K., Ohnishi, A. and Nagasaka, Y., "Computational design of solar reflection and far-infrared transmission films for a variable emittance device", *Appl. Optics.*, **42**(7), 1360 - 1366, (2003).
88. Fukuzawa, K., Ohnishi, A. and Nagasaka, Y., "A Prediction of Thermal Radiative Properties of Multilayer Thermal Control Material Based upon Polyimide Film for Space Use", *J. Japan Soc. Aeronautical and Space Science*, **50**(579), 129 - 134, (2002).
87. Fukuzawa, K., Ohnishi, A. and Nagasaka, Y., "Total Hemispherical Emitance of Polyimide Films for Space Use in the Temperature Range from 173 to 700 K", *Int. J. Thermophys.*, **23**(1), 319 - 331, (2002).
86. Taguchi, Y. and Nagasaka, Y., "Thermal Diffusivity Measurement of High-Conductivity Materials by means of Dynamic Grating Radiometry", *Trans. JSME*, **B-68**(665), 194-200 (2002).
85. Nakazato, M., Suzuki, T., Nagasaka, Y., Abe, Y., Bellingeri, S. and Maizza, G. , "Diamond Synthesized by DC-Plasma CVD at High Gravity", *Processing by Centrifugation* (Ed. by

Regel, L. L. and Wilcox, W. R.), 107 - 112, (2001).

84. Abe, Y., Bellingeri, S., Maizza, G., Ishizuka, M., Nagasaka, Y. and Suzuki, T., " Diamond Synthesis by High-Gravity D.C. Plasma CVD(HGCVD) with Active Control of the Substrate Temperature", *Acta Astronomica,* **48**(2-3), 121 - 127, (2001).
83. Shimazaki, K., Tachikawa, S., Ohnishi, A. and Nagasaka, Y., "Design of Thermal Radiative Properties of Multilayer Films on a Variable Emittance Radiator", *SAE 2001 Transactions, J. Aerospace*, Section 1 – Vol.110, 106 – 114 , (2001).
82. Nagasaka, Y., Sato, T. and Ushiku, T., "Non-destructive evaluation of thermal diffusivity distribution of functionally graded materials by the photothermal radiometry", *Meas. Sci. Technol.*, **12**, 2081 - 2088, (2001).
81. Nagano, H., Ohnishi, A. and Nagasaka, Y., "Thermophysical Properties of a High Thermal Conductivity Graphite Sheet for Spacecraft Thermal Design", *J. Thermophys. Heat Transfer (AIAA)*, **15**(3), 347 - 353, (2001).
80. Kumasaka, N. and Nagasaka, Y., "Equilibrium molecular dynamics calculation of the transport properties of HFC-134a", *High Temperatures - High Pressures*, **33**, 311 - 317, (2001).
79. Nagano, H., Kato, H., Ohnishi, A. and Nagasaka, Y., "Measurement of Thermal Diffusivity of Graphite Sheet at Low Temperatures", *High Temperatures - High Pressures*, **33**, 253 - 259, (2001).
78. Taguchi, Y. and Nagasaka, Y., "Thermal Diffusivity Measurement of High-Conductivity Materials by Dynamic Grating Radiometry", *Int. J. Thermophys.*, **22**(1), 289 - 299, (2001).
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C. Conference Papers (International and Domestic)

625 papers (not listed)

D. Reviews and Articles Papers (International and Domestic)

85 papers (not listed)

Invited Lectures

37. "Nano and Microscale Thermophysical Properties Measurement by Optical Sensing", The 2nd Meeting of Photonic Devices and Their Application Technologies (Optoelectronics Industry and Technology Development Association), Tokyo, Japan, July, 12 (2017).
36. "Nanoscale Thermal Conductivity Sensing: A Tool for Phonon Spectroscopy", The 63rd Spring Meeting of the Japan Society of Applied Physics, Tokyo, Japan, March, 22 (2016).
35. "Nano and Microscale Thermophysical Properties Sensing by Light Scattering Techniques", International Colloquium on the Occasion of the Retirement of Prof. Leipertz, Erlangen, Germany, September, 19 (2014).
34. "Possibility of Detection of Nanobubbles in Water by Observing Thermally Excited Capillary Waves(Accurate instrument for measuring the surface tension, viscosity and surface viscoelasticity of liquids using ripplon surface laser-light scattering with tunable wavelength selection)", 8th US-Japan Joint Seminar on Nanoscale Transport Phenomena, Santa Cruz, CA, USA, July, 15 (2014).
33. "Nano-Micro Thermophysical Properties Sensing Engineering and Its Applications", 10th Asian Thermophysical Properties Conference, Jeju, Korea, September, 30 (2014).
32. "Thermophysical Properties Research - Fascinated by Science and Engineering of Transport of Energy, Momentum and Mass", 5th Workshop of Thermal Engineering Division, JSME, Shonan, Japan, November, 4 (2012).
31. "Nano-Micro Thermophysical Properties Sensing Science and Engineering" (Keynote), 12th Conference of Korean Society of Thermophysical Properties (KSTP), Jeju, Korea, April, 5 (2012).
30. "Nano/Micro Thermophysical Properties Sensing Science and Engineering" (Keynote), Japan/U.S. Joint Seminar, Nanoscale Transport Phenomena -Science and Engineering-, Shima, Japan, November, 12 (2011).
29. "Nano/Micro thermophysical properties sensing engineering and its applications" (Invited), 19th European Conference on Thermophysical Properties, Thessaloniki, Greece, August, 29 (2011).
28. "From Measurement To Sensing : New Frontiers of Micro and Nano-Scale

Thermophysical Properties Research" (Keynote), 9th Asian Thermophysical Properties Conference ATPC2010, Beijing, China, October, 22 (2010).

27. "From measurement to sensing: New frontiers of micro and nano-scale transport properties research", Symposium on Thermophysical Properties of Fluids: In Honour of Professor Sir William Wakeham", Turcifal, Portugal, October, 3 (2009).
26. "Nano-Micro Level Thermophysical Properties Sensing Techniques and Their Applications : Microscale Mass Diffusion Sensing of Multi-component Polymer Solutions by Soret Forced Rayleigh Scattering", 15th International Conference on Photoacoustic and Photothermal Phenomena, Leuven, Belgium, July, 21 (2009).
25. "Micro and Nanoscale Thermophysical Properties Sensing Techniques and Their Application", The 25th Sensor Symposium 2008, Okinawa, Japan, October, 23 (2008).
24. "Microscale Mass Diffusion Sensing of Polymer Solutions Using Soret Forced Rayleigh Scattering", 2nd Integration & Commercialization of Micro & Nanosystems International Conference & Exhibition, Kowloon, Hong Kong, China (HKUST), June, 4 (2008).
23. "Basics of Thermophysical Properties", The 123rd Symposium of Technical Committee on Temperature Measurement: The Society of Instrument and Control Engineers, Taiyo Nippon Sanso, Tokyo, July, 27 (2007).
22. "New Frontiers of Micro and Nano-Scale Thermophysical Properties Sensing"(Keynote), 2007 ASME-JSME Thermal Engineering Conference, Vancouver, Canada, July, 10 (2007).
21. "Development of Innovative Nano-Micro Level Thermophysical Properties Sensing Techniques and Their Applications", Institute of Advanced Material Study, Kyushu University, Fukuoka, December, 1 (2006).
20. "Surface properties sensing by ripplon and laser-induced capillary wave", Spectroscopical Society of Japan, Riken, Wako, December, 8 (2006).
19. "Micro/Nano-scale Thermophysical Properties Sensing", Colloquium on Micro/Nano Thermal Engineering 2006, Seoul National University, Korea, August, 2 (2006).
18. "Evaluation of Figure of Merit of Submicron Bi_2Te_3 Thin Films (Application of photothermal radiometry for thermal conductivity measurement of sputtered and pulsed laser deposited films)", Korean Society of Thermophysical Properties Symposium 6, Seoul, Korea, April, 27 (2006).
17. "Application of micro and nano-scale thermophysical properties sensing for novel fluids and solids", 17th European Conference on Thermophysical Properties, Plenary Lecture, Bratislava, Slovakia, September, 7 (2005).
16. "Do We Need Thermophysical Properties in Nano/Microscale", US-Japan Seminar : Nanotherm : Nanoscale Thermal Science and Engineering, Berkeley, USA, June, 24 (2002).
15. "Thermophysical Properties Measurement of Liquids and Solids by Photothermal Techniques", 6th Asian Thermophysical Properties Conference, Guwahati, India, November 10, (2001).
14. "Thermal Control Techniques for Space and Thermophysical Properties Measurement", Space Infrastructure Study Group, NASDA, Tokyo, February, 28 (2001).
13. "Frontiers of Thermophysical Properties Measurement using Photothermal Effects", Institute of Advanced Material Study, Kyushu University, Fukuoka, December, 6 (2000).
12. "Not for property itself, but for design and control", 15th European Conference on Thermophysical Properties, Workshop "Major Challenges for Fluids Transport Property Research in the Next Century", Wurzburg, Germany, September, 6 (1999).
11. "Thermophysical Properties of High-Temperature Melts and Solids", 19th Meeting of the Subcommittee on Transport Properties of IUPAC Commission I.2 Thermodynamics,

Erlangen, Germany, September, 3 (1999).

10. International Symposium on Thermophysical Properties of Functional Micro-Materials, "Applications of Various Photothermal Techniques to Measure Thermophysical Properties of Functional Materials", Nagoya University, Nagoya, February, 23 (1999).
9. "Suppression of metabolism by the structured water and observation of relaxation phenomena on surface properties", Joint Symposium on Thermal Problems in the Bio-food process Engineering, Waseda University, Tokyo, January, 22 (1999).
8. "Thermophysical Properties Measurement of Liquids and Solids by Photothermal Techniques", 2nd ICRS International Symposium, Tohoku University, Sendai, December, 10 (1998).
7. "Determination of the Thermal Diffusivity Distribution of Functionally Graded Materials (Ni/ZrO_2) by the Photothermal Radiometry", 5th Asian Thermophysical Properties Conference, Seoul, August, 30 (1988).
6. "Thermophysical Properties Measurement of Liquids and Solids by Photoacoustic and Photothermal Techniques", 10th International Conference on Photoacoustic and Photothermal Phenomena, Rome, Italy, August, 23 (1998).
5. "Current Research Activities in Keio University (Research Laboratory for Thermophysics and Heat and Mass Transfer", Colorado School of Mines, USA, June, 23 (1997).
4. "Fluctuation, Light, Sound and Thermophysical Properties Measurement", Hokkaido University, Sapporo, December, 18 (1995).
3. "Thermophysical Properties Research and Microgravity", IN SPACE:95, Tokyo, November, 17, (1995).
2. "New Optical Methods to Measure Thermophysical Properties", Seoul National University, November 17-20, (1994).
1. "Thermophysical Properties of Molten Materials", Workshop on Thermophysical Properties of High Temperature Molten Materials, 13th European Conference on Thermophysical Properties, Lisboa, Portugal, August 30 - September 3, (1993).