Issue 1

Effect of Thermodynamic Parameters and Geometry on Thermal Non-Equilibrium Flows
A. Sinha & S. Gopalakrishnan

Numerical Analysis of Droplet Detachment from Hydrophobic Surfaces During Electrowetting
S.G. Nayak & J. Banerjee

Reuse of Produced Water to Create Stable Oil-in-Water Dispersions for Sustainable Environmental and Economic EOR: Droplet Size Measurements Using Coulter Counter Multisizer
N. Alahmed, I. Fjelde, & M.S. de Castro

Modeling of Phase Inversion in Three-Phase Oil-Water-Gas Annular-Duct Flow: Effects of Liquid Viscosity and Gas Injection
J.E. Castro B & O.M.H. Rodriguez

Issue 2

A Review on Formation, Characterization, and Role of Micro/Nanotextured Surfaces on Boiling Heat Transfer Performance
N. Kumar, P. Ghosh, & P. Shukla

Dynamics of Disturbance Waves in an Adiabatic Coaxial Gas-Liquid Annular Flow
L.D. Silvi, DK. Chandraker, S. Ghosh, & A.K. Das

Transversal Oscillation of a Planar Liquid Sheet Induced by Co-Current Airflows
I. Oshima & A. Sou

Critical Diameter for Lift Reversal of Bubbles in Linear Shear Flows
K. Hayashi, D. Lucas, D. Legendre, & A. Tomiyama

Effects of Initial Liquid Height on Total and Local Gas Holdups in a Air-Water Bubble Column
N. Kobayashi, S. Adomi, R. Kurimoto, K. Hayashi, & A. Tomiyama

Issue 3

Special Issue: Experimental Multiphase Flow Dynamics
Guest Editors: Akimaro Kawahara

Preface: Experimental Multiphase Flow Dynamics
A. Kawahara

Effect of Ultrafine Bubble Mixtures on the Flow Properties of Worm-Like Micellar Solutions Passing through Micro-Slits
A. Ushida, T. Kobayashi, Y. Nakamoto, & T. Sato

Generation of Micr bubbles by Subcooled Boiling of Water with Dissolved Incondensable Gases
Y. Li, S. Hosokawa, K. Hayashi, A. Tomiyama, N. Shibata, & Y. Maeda

Experimental Development of an Advanced Oxidation Process by Using Fluid Mixing Equipment and Plasma
F. Matsuyama, K. Nakashima, & Y. Johno

Experimental Investigation of Hydraulic Performance of Twin-Fluid Mist Generators for High Viscous Liquids
R. Kamimura, Y. Yonemoto, T. Arita, & A. Kawahara
Issue 4
Special Issue: Experimental Multiphase Flow Dynamics
Guest Editors: Akimaro Kawahara

Preface: Experimental Multiphase Flow Dynamics
A. Kawahara v

Removal of Hydrophobic Fine Particles in Bubbly Flow
M. Kawabata, K. Hayashi, R. Kurimoto, & A. Tomiyama 1

Measurement of Void Fraction Distribution with Small Wire Mesh Sensor in Water-Air Two-Phase Bubble and Slug Flows in Vertical Small Diameter Pipe
H. Tsubone, T. Shiotsuka, T. Yamashiro, & T. Fujino 15

An Experimental Study of a Polymer Pulsating Heat Pipe 3D-Printed on a Thin Polymer Sheet
Y. Koito, H. Yoshida, & Z. Pei 31

Visualization Experiments on a Operational Characteristics of a Centered-Wick Heat Pipe (Effect of Liquid Volume)
C. Chen, R. Kakizoe, & Y. Koito 45

Index, Volume 33, 2021
<table>
<thead>
<tr>
<th>Author</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adomi, S.</td>
<td>87</td>
</tr>
<tr>
<td>Alahmed, N.</td>
<td>41</td>
</tr>
<tr>
<td>Arita, T.</td>
<td>43</td>
</tr>
<tr>
<td>Banerjee, J.</td>
<td>19</td>
</tr>
<tr>
<td>Castro B, J.E.</td>
<td>65</td>
</tr>
<tr>
<td>Chandraker, D.K.</td>
<td>29</td>
</tr>
<tr>
<td>Das, A.K.</td>
<td>29</td>
</tr>
<tr>
<td>de Castro, M.S.</td>
<td>41</td>
</tr>
<tr>
<td>Fjelde, I.</td>
<td>41</td>
</tr>
<tr>
<td>Fujino, T.</td>
<td>15</td>
</tr>
<tr>
<td>Ghosh, P.</td>
<td>1</td>
</tr>
<tr>
<td>Ghosh, S.</td>
<td>29</td>
</tr>
<tr>
<td>Gopalakrishnan, S.</td>
<td>1</td>
</tr>
<tr>
<td>Hayashi, K.</td>
<td>1, 17, 53, 69, 87</td>
</tr>
<tr>
<td>Hosokawa, S.</td>
<td>17</td>
</tr>
<tr>
<td>Johno, Y.</td>
<td>33</td>
</tr>
<tr>
<td>Kamimura, R.</td>
<td>43</td>
</tr>
<tr>
<td>Kawabata, M.</td>
<td>1</td>
</tr>
<tr>
<td>Kawahara, A.</td>
<td>43</td>
</tr>
<tr>
<td>Kobayashi, N.</td>
<td>87</td>
</tr>
<tr>
<td>Kobayashi, T.</td>
<td>1</td>
</tr>
<tr>
<td>Koito, Y.</td>
<td>31, 45</td>
</tr>
<tr>
<td>Kumar, N.</td>
<td>1</td>
</tr>
<tr>
<td>Kurimoto, R.</td>
<td>1, 53, 87</td>
</tr>
<tr>
<td>Legendre, D.</td>
<td>69</td>
</tr>
<tr>
<td>Li, Y.</td>
<td>17</td>
</tr>
<tr>
<td>Lucas, D.</td>
<td>69</td>
</tr>
<tr>
<td>Maeda, Y.</td>
<td>17</td>
</tr>
<tr>
<td>Matsuyama, F.</td>
<td>33</td>
</tr>
<tr>
<td>Nakamoto, Y.</td>
<td>1</td>
</tr>
<tr>
<td>Nakashima, K.</td>
<td>33</td>
</tr>
<tr>
<td>Nayak, S.G.</td>
<td>19</td>
</tr>
<tr>
<td>Oshima, I.</td>
<td>53</td>
</tr>
<tr>
<td>Pei, Z.</td>
<td>31, 45</td>
</tr>
<tr>
<td>Rodriguez, O.M.H.</td>
<td>65</td>
</tr>
<tr>
<td>Sato, T.</td>
<td>1</td>
</tr>
<tr>
<td>Shibata, N.</td>
<td>17</td>
</tr>
<tr>
<td>Shiotsuka, T.</td>
<td>15</td>
</tr>
<tr>
<td>Shukla, P.</td>
<td>1</td>
</tr>
<tr>
<td>Silvi, L.D.</td>
<td>29</td>
</tr>
<tr>
<td>Sinha, A.</td>
<td>1</td>
</tr>
<tr>
<td>Sou, A.</td>
<td>53</td>
</tr>
<tr>
<td>Tomiyama, A.</td>
<td>1, 17, 53, 69, 87</td>
</tr>
<tr>
<td>Tsubone, H.</td>
<td>15</td>
</tr>
<tr>
<td>Ushida, A.</td>
<td>1</td>
</tr>
<tr>
<td>Yamashiro, T.</td>
<td>15</td>
</tr>
<tr>
<td>Yonemoto, Y.</td>
<td>43</td>
</tr>
<tr>
<td>Yoshida, H.</td>
<td>31, 45</td>
</tr>
</tbody>
</table>
air-blast atomizer, 53
air-water two phase flow, 15, 31
annular, 29
atomization, 43
boiling heat transfer, 1
boundary conditions, 19
bubble column, 87
bubble generation, 17
bubble number density, 17
bubble, 1, 53
CFD, 29
condensation, 45
contact angle hysteresis, 19
coulter counter multisizer, 41
dispersed oil-in-water, 41
dispersions, 65
disturbance wave, 29
drop sizes, 65
droplet breakoff, 19
droplet size distributions, 41
electronics cooling, 45
emulsion stability, 41
entrainment deposition, 29
evaporation, 45
flashing, 1
gas injection, 65
gas turbine, 53
gas-liquid flow, 29
gas–liquid interface discharge
plasma, 33
heat transfer, 45
high voltage, 15, 31
high-viscosity liquid, 43
homogeneous relaxation model, 1
initial liquid height, 87
lift force, 69
lift reversal, 69
liquid circulation, 53
liquid film, 65
liquid viscosity, 65
local gas holdup, 87
magnitude of deformation, 19
membrane bioreactor, 53
micellar solution, 1
microaperture, 1
microbubble, 33
microbubbles, 17
mist generator, 43
modeling, 53
negative lift, 69
optical measurement, 1
phase inversion, 65
planar vessel, 53
pool boiling, 1
pressure drop, 1
Rayleigh–Taylor instability, 53
refrigerant, 15, 31
removal rate coefficient, 1
resistance heating, 17
round nozzle, 1
shape deformation, 69
sludge removal, 53
small diameter pipe, 15, 31
spraying, 43
subcooled boiling, 17
textured surface, 1
thermal management, 45
three-phase flows, 65
total gas holdup, 87
transversal wavelength, 53
turbulence, 1
turbulent flow, 65
two-phase flow, 45
two-phase, 1
two-region model, 87
ultrafine bubble, 1
ultrahigh flux, 1
visualization, 53
VOF, 29
void fraction distribution, 15, 31
water treatment, 33
wire mesh sensor, 15, 31
wormlike micelle, 1
Young-Lippmann equation, 19