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## Commentary

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Jacopo Buongiorno and David C. Venerus

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*Transfer*. 2010;132(8):080401-080401-2.

doi:10.1115/1.4001318.

### Photogallery

#### Heat Transfer

### Gallery

Kenneth D. Kihm

*J. Heat*

*Transfer*. 2010;132(8):080901-080901-1.

doi:10.1115/1.4001749.

### Marangoni

#### Convection and Thin-

### Film Evaporation in Microstructured Wicks for Heat Pipes

Ram Ranjan, Jayathi Y. Murthy and Suresh V. Garimella

*J. Heat*

*Transfer*. 2010;132(8):080902-080902-1.

doi:10.1115/1.4001750.

### Nonintrusive

#### Measurements of

### Mixture Concentration Fields (Water + Glycerol) by Analyzing Diffraction Image Patterns of Spatially Fixed Fluorescent Nanoparticles

Jae-Sung Park and Kenneth D. Kihm

*J. Heat*

*Transfer*. 2010;132(8):080903-080903-1.

doi:10.1115/1.4001751.

### ESEM Imaging of

#### Condensation on a

### Nanostructured Superhydrophobic Surface

C. Dietz, K. Rykaczewski, A. Fedorov and Y. Joshi

*J. Heat*

*Transfer*. 2010;132(8):080904-080904-1.

doi:10.1115/1.4001752.

### Evaporation

#### Characteristics of

### Sessile Droplets on Nano-Patterned Hydrophobic Surfaces

Dong Hwan Shin, Seong Hyuk Lee, Scott Retterer and Chang Kyoung Choi

*J. Heat  
Transfer.* 2010;132(8):080905-  
080905-1.  
doi:10.1115/1.4001753.

**Research Papers:** Conduction

## Heat Flux Estimation in a Nonlinear Inverse Heat Conduction Problem With Moving Boundary

Hosein Molavi, Ramin K. Rahmani, Alireza Pourshaghaghay, Ebrahim Sharifi Tashnizi and Ali Hakkaki-Fard

*J. Heat  
Transfer.* 2010;132(8):081301-  
081301-10.  
doi:10.1115/1.4001305.

**Criteria for Cross-  
Plane Dominated**

## Thermal Transport in Multilayer Thin Film Systems During Modulated Laser Heating

Patrick E. Hopkins, Justin R. Serrano, Leslie M. Phinney, Sean P. Kearney, Thomas W. Grasser and C. Thomas Harris

*J. Heat  
Transfer.* 2010;132(8):081302-  
081302-10.  
doi:10.1115/1.4000993.

**A Meshless Finite  
Difference Method for**

## Conjugate Heat Conduction Problems

Chandrashekhar Varanasi, Jayathi Y. Murthy and Sanjay Mathur

*J. Heat  
Transfer.* 2010;132(8):081303-  
081303-13.  
doi:10.1115/1.4001363.

**Research Papers:** Electronic  
Cooling

## Numerical Simulation of Convective Heat Transfer Modes in a Rectangular Area With a Heat Source and Conducting Walls

G. V. Kuznetsov and M. A. Sheremet

*J. Heat  
Transfer.* 2010;132(8):081401-  
081401-9.  
doi:10.1115/1.4001303.

**Experimental  
Investigation of an**

## Ultrathin Manifold Microchannel Heat Sink for Liquid-Cooled Chips

W. Escher, T. Brunswiler, B. Michel and D. Poulikakos

*J. Heat  
Transfer.* 2010;132(8):081402-  
081402-10.  
doi:10.1115/1.4001306.

**Fluid Flow and Heat  
Transfer in a Horizontal**

## Channel With Divergent Top Wall and Heated From Below

C. S. Yang, D. Z. Jeng, C. W. Liu, C. G. Liu and C. Gau

*J. Heat  
Transfer.* 2010;132(8):081403-  
081403-8.  
doi:10.1115/1.4001606.

**Research  
Papers:** Evaporation, Boiling,  
and Condensation

## A Scale Analysis Based Theoretical Force Balance Model for Critical Heat

## Flux (CHF) During Saturated Flow Boiling in Microchannels and Minichannels

Satish G. Kandlikar

*J. Heat*

*Transfer*. 2010;132(8):081501-081501-13.  
doi:10.1115/1.4001124.

Bubble Dynamics for  
Nucleate Pool Boiling

## of Electrolyte Solutions

Seyed Ali Alavi Fazel and Seyed Baher Shafaei

*J. Heat*

*Transfer*. 2010;132(8):081502-081502-7.  
doi:10.1115/1.4001315.

**Research  
Papers:** Experimental  
Techniques

## Rendering the Transient Hot Wire Experimental Method for Thermal Conductivity Estimation to Two-Phase Systems—Theoretical Leading Order Results

Peter Vadasz

*J. Heat*

*Transfer*. 2010;132(8):081601-081601-7.  
doi:10.1115/1.4001314.

Thermal  
Conductance of a

## Multilayer Drift Chamber: An Experimental Approach

Manuel Daniel-Leal, Luciano Romero-Barajas and Jose L. Perez-Diaz

*J. Heat*

*Transfer*. 2010;132(8):081602-081602-6.  
doi:10.1115/1.4001103.

**Research Papers:** Forced  
Convection

## Thermohydraulics of Laminar Flow Through Rectangular and Square Ducts With Axial Corrugation Roughness and Twisted Tapes With Oblique Teeth

Sujoy Kumar Saha

*J. Heat*

*Transfer*. 2010;132(8):081701-081701-12.  
doi:10.1115/1.4001313.

**Research Papers:** Heat  
Exchangers

## Multi-Objective Optimization of Heat Exchanger Design by Entropy Generation Minimization

Jiangfeng Guo, Lin Cheng and Mingtian Xu

*J. Heat*

*Transfer*. 2010;132(8):081801-081801-8.  
doi:10.1115/1.4001317.

**Research  
Papers:** Micro/Nanoscale Heat  
Transfer

## Modeling Carrier-Phonon Nonequilibrium Due to Pulsed Laser Interaction With Nanoscale Silicon Films

Arvind Pattamatta and Cyrus K. Madnia

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*Transfer*. 2010;132(8):082401-082401-9.  
doi:10.1115/1.4001101.

Particle Aspect-Ratio  
and Agglomeration-

## State Effects on the Effective Thermal Conductivity of Aqueous Suspensions of Multiwalled Carbon Nanotubes

Anna S. Cherkasova and Jerry W. Shan

*J. Heat*

*Transfer*. 2010;132(8):082402-082402-11.  
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Technical Briefs

## Impact of Thermodiffusion on Carbon Nanotube Growth by Chemical Vapor Deposition

Andrew C. Lysaght and Wilson K. S. Chiu

*J. Heat*

*Transfer*. 2010;132(8):084501-084501-4.  
doi:10.1115/1.4001099.

Analytical Solution for  
Forced Convection in a

## Sector Duct Filled With a Porous Medium

C. Y. Wang

*J. Heat*

*Transfer*. 2010;132(8):084502-084502-4.  
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Transient  
Temperature Data

## Analysis for a Supersonic Flight Test

Niranjan Sahoo and Ravi Kumar Peetala

*J. Heat*

*Transfer*. 2010;132(8):084503-084503-5.  
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