

ISSN 2162-6162 Volume 1, Number 3, December 2011



Scientific  
Research

# Journal of Electronics Cooling and Thermal Control

ISSN: 2162-6162



[www.scirp.org/journal/jectc](http://www.scirp.org/journal/jectc)

# Journal Editorial Board

ISSN 2162-6162 (print) ISSN 2162-6170 (online)

<http://www.scirp.org/journal/jectc>

---

## Editor-in-Chief

**Prof. Shu-shen Lu**

Sun Yat-sen University, China

**Prof. Dayong Gao**

University of Washington, USA

## Editorial Board

**Dr. Bensely Albert**

ASML Netherlands BV, Netherlands

**Prof. Ming Chyu**

Texas Tech University, USA

**Dr. Xili Duan**

Massachusetts Institute of Technology, USA

**Dr. Mohamed S. Hamed**

McMaster University, Canada

**Prof. Jesper Henri Hattel**

DTU Mechanical Engineering, Denmark

**Prof. Shung-Wen Kang**

Tamkang University, Chinese Taipei

**Dr. Abdul Rahim Assaad Khaled**

King Abdulaziz University, Saudi-arabia

**Dr. Oleg Lupan**

Technical University of Moldova (T.U.M.), Moldova

**Dr. Shaibal Mukherjee**

Indian Institute of Technology, India

**Dr. Juan Carlos Ordonez**

Florida State University, USA

**Prof. Rathinam Panneer Selvam**

University of Arkansas, USA

**Dr. Peng Xu**

China Jiliang University, China

**Prof. Yuwen Zhang**

University of Missouri, USA

---

## Editorial Assistant

**Lilliam Chen**

Scientific Research Publishing, USA Email: [jectc@scirp.org](mailto:jectc@scirp.org)

## TABLE OF CONTENTS

**Volume 1    Number 3**

**December 2011**

**Effect of Heat Extraction by Metal Lines and Two Sided Cooling on Temperatures in Organic Light Emitting**

Deepak, G. N. Shukla.....29

**Experimental Study of Jet Nanofluids Impingement System for Cooling Computer Processing Unit**

P. Naphon, S. Wongwises.....38

# **Journal of Electronics Cooling and Thermal Control (JECTC)**

## **Journal Information**

### **SUBSCRIPTIONS**

The *Journal of Electronics Cooling and Thermal Control* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published quarterly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$39 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **SERVICES**

#### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### **Reprints (minimum quantity 100 copies)**

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### **COPYRIGHT**

Copyright©2011 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

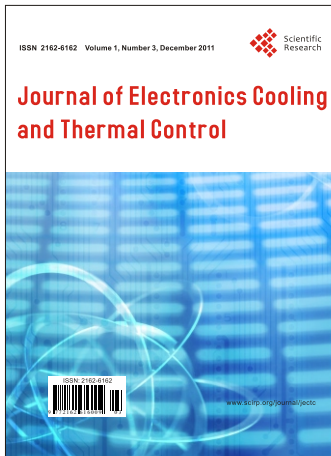
Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

### **PRODUCTION INFORMATION**

For manuscripts that have been accepted for publication, please contact:

E-mail: [jectc@scirp.org](mailto:jectc@scirp.org)



# Journal of Electronics Cooling and Thermal Control

ISSN 2162-6162 (print) ISSN 2162-6170 (online)

<http://www.scirp.org/journal/jectc>

**Journal of Electronics Cooling and Thermal Control (JECTC)** is a quarterly, peer-reviewed, academic journal. It aims to provide a vehicle for the exchange and dissemination of original research results, technical notes, and state-of-the-art reviews pertaining to the electronic cooling and thermal system control technology in the computer and electronics industries.

## Subject Coverage

This journal invites original research and review papers that address the following issues. Topics of interest include, but are not limited to:

### Fundamentals and applications of heat/mass transfer processes for the electronics and micro-electronics, such as

- Base board design and material structure
- Control scenario
- Fan design and performance
- Forced convection heat transfer
- Heat storage
- High heat conductive materials
- Insulation
- Interface thermal contact performance
- Natural convection heat transfer
- Phase changing heat transfer
- Phonon
- Radiation
- Spray cooling
- Temperature stability

### Technologies based on these transport processes such as

- Enhanced heat/mass transfer in precision-, micro-electronics, information technology
- Heat pipe
- MEMS (Micro-Electro-Mechanical-Systems) and NEMS (Nano-Electro-Mechanical-Systems)
- Various electronic devices, etc.

We are also interested in: 1) Short reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book reviews—Comments and critiques.

## Notes for Intending Authors

The submitted manuscript should not have been previously published in any form and must not be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submission, please access the website.

## Website and E-Mail

<http://www.scirp.org/journal/jectc>

Email: [jectc@scirp.org](mailto:jectc@scirp.org)