

Special Issue on  
**Thermal Transport in Nanoscale Organic Materials and Interfaces**

# CALL FOR PAPERS

The rapid development of organic nanoelectronics has attracted enormous attentions of the research community. Nanoscale organic materials such as high thermal conductivity polymers, bioinspired soft matter, organic field-effect transistors (OFETs), organic light-emitting diode (OLED), and organic photovoltaics (OPV) are the critical building blocks for the next-generation electronic devices. Thermal transport, which constantly happens from nanoscale to macroscale in these materials due to Joule heating, could affect the device's lifetime and stability. While the thermal masses of most thin-film nanoscale organic materials are small, the underlying mechanisms of heat generation and dissipation and their impacts on the electronic device require knowledge of the thermal conductivity within and across the materials that comprise the device. In particular, thermal transport at material interface becomes prominent when devices are miniaturized to micro/nanoscales.

The objective of this special issue is to provide a platform for researchers to report their up-to-date progresses on heat transfer analysis in nanoscale organic materials and thermal transport phenomena at interfaces. We invite contributions of both original research articles and review articles from theoretical, experimental, and numerical studies aiming to advance the fundamental understanding and practical application of nanoelectronic devices.

Potential topics include but are not limited to the following:

- ▶ Thermophysical property characterizations of nanoscale organic materials such as polymer, organic semiconductor, and biomaterials using experimental, theoretical, or numerical methods
- ▶ Nanoscale thermal transport at interfaces
- ▶ Thermoelectric and thermophotovoltaic energy conversion
- ▶ Electron-phonon and phonon-phonon interactions
- ▶ Thermal management of nanoscale electronics
- ▶ Modelling and simulations of the thermal transport from atomic scale to micrometer scale

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jnm/tto/>.

**Lead Guest Editor**

Jingchao Zhang, University of Nebraska-Lincoln, Lincoln, USA  
*zhang@unl.edu*

**Guest Editors**

Yanan Yue, Wuhan University, Wuhan, China  
*yyue@whu.edu.cn*

Tengfei Luo, University of Notre Dame, Notre Dame, USA  
*tluo@nd.edu*

Xuihui Feng, National Renewable Energy Laboratory, Golden, USA  
*xuhui.feng@nrel.gov*

**Manuscript Due**

Friday, 14 July 2017

**First Round of Reviews**

Friday, 6 October 2017

**Publication Date**

Friday, 1 December 2017