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Future and Prospects in Non-Newtonian and Nanofluids

Guest Editors:

Dr. Mohammad Reza Safaei

Department of Mechanical and Materials Engineering, Florida International University, Miami, FL 33199, USA

Dr. Omid Mahian

School of Chemical Engineering and Technology, Xi'an Jiaotong University, Xi'an 710049, China

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Message from the Guest Editors

Dear Colleagues,

Considering the linear relation between the changes in shear stress and rate of shear strain, the behavior of many single-phase fluids, which include merely the compounds with low molecular weight, are called Newtonian fluids, have been simulated in the past. The development of the chemical industry at the beginning of the 20th century resulted in the emergence of a broad spectrum of synthetic materials, such as polymers.

Moreover, increasing the usage of materials such as suspensions, emulsions, adhesives, and the advent of oil exploration required to study a variety of materials that exhibit strange behavior, because the relations of Newtonian fluids were not able to predict their shear behavior. The Newtonian model cannot describe the flow behavior of these fluids, called non-Newtonian fluids.....

Dr. Mohammad Reza Safaei Dr. Omid Mahian *Guest Editors*







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Editor-in-Chief

Prof. Dr. Sergei D. Odintsov

1. Institució Catalana de Recerca i Estudis Avançats (ICREA), Passeig Luis Companys, 23, 08010 Barcelona, Spain 2. Institute of Space Sciences (ICE-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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