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NANOFLUIDS: SYNTHESIS, CHARACTERIZATION, AND APPLICATIONS

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DESCRIPTION

Introduction
In recent years, the domain of nanofluids has emerged as a forefront of research, holding immense potential for a myriad of applications across diverse fields. These suspensions, consisting of nanoparticles dispersed within base fluids, have exhibited extraordinary thermal, mechanical, and rheological properties. This has generated widespread interest from researchers and industries alike. We are excited to introduce a special issue within open physics, designed to serve as a platform for scientists, engineers, and experts to disseminate their latest discoveries and innovations in the realm of nanofluids.

Objective
The primary aim of this special issue is to assemble a collection of pioneering research articles that delve into the frontiers of nanofluid science and technology. Our goal is to foster a deeper comprehension of the fundamental aspects of nanofluids while accentuating their practical applications. In doing so, we aspire to contribute to the advancement of knowledge and the development of inventive solutions.

Topics of interest
We cordially invite submissions on an extensive array of topics concerning nanofluids, encompassing, but not restricted to:

- Nanoparticle Synthesis: Novel approaches for fabricating nanoparticles tailored for applications in nanofluids, including techniques for controlling size, shaping, and surface properties.
- Characterization Techniques: State-of-the-art methods for analyzing nanofluids, encompassing electron microscopy, spectroscopy, thermal analysis, and rheological properties measurements.
- Thermal Properties: Inquiries into the thermal conductivity, enhancement of heat transfer, and stability of nanofluids to enhance thermal management.
- Rheological Behavior: Investigations into the flow characteristics of nanofluids, including viscosity, shear-thinning behavior, and the stability of nanoparticle suspensions.
- Heat Exchangers and Cooling Systems: Using nanofluids in heat exchangers, cooling systems, and energy-efficient technologies.

- Biomedical and Pharmaceutical Applications: The application of nanofluids in drug delivery systems, hyperthermia treatments, and other biomedical domains.
- Environmental and Sustainable Nanofluids: Research focused on environmentally friendly nanofluids, sustainable synthesis techniques, and recyclability.
- Numerical and Computational Modeling: The development of models and simulations to predict nanofluid behavior under diverse conditions.
- Industrial Case Studies: Real-world applications and success stories of nanofluids across industries such as electronics, automotive, aerospace, and energy.

Conclusion
We warmly extend our invitation to researchers, scientists, and experts within the domain of nanofluids to contribute their innovative work to this special issue featured in ***Open Physics***. By sharing your insights and discoveries, you will play a pivotal role in advancing the comprehension and utilization of nanofluids, ultimately paving the way for their transformative applications across a multitude of industries. Together, let's embark on a journey to explore the potential of nanofluids and unlock the vast opportunities they hold.

KEYWORDS

Nanofluids, Nanoparticle synthesis, Characterization techniques, Thermal properties, Rheology, Heat exchangers, Biomedical applications, Sustainable nanofluids, Computational modeling, Industrial applications.

PUBLICATION SCHEDULE / HOW TO SUBMIT

Open for submissions: 1st October 2023
Paper submission deadline: 31st December, 2023

Submission Guidelines:
Authors are strongly encouraged to submit original research articles, reviews, and theoretical contributions related to nanofluids. Manuscripts should adhere to the highest scientific standards, prioritizing clarity and accuracy. Before submitting, authors should carefully read the Instruction for Authors, which is available at: https://www.degruyter.com/publication/journal_key/PHYS/downloadAsset/PHYS_Instruction%20for%20Authors.pdf

Manuscripts should be submitted to the journal via the online Editorial Manager submission system available at: https://www.editorialmanager.com/openphys/default.aspx

All submissions will undergo the standard single-blind peer review system. When entering your submission please choose the option type of an article: "Nanofluids: Synthesis, Characterization, and Applications". In case of any technical problems, please contact the Managing Editor of ***Open Physics***: **Juliusz Skoryna**, Ph.D., **Juliusz.Skoryna@degruyter.com**