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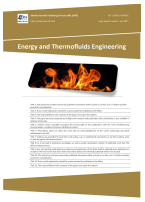

# Nanofluids: New Generation Fluids on Industrialization Path

Editorial

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In the last Editorial, we presented the evolution of the journal "Energy and Thermofluids Engineering, ETE" (Mahbubul 2021) and mentioned that the Journal focuses on three main areas: renewable energy, conventional energy, and thermofluids engineering. The current Editorial is about nanofluids as one of the most promising thermofluids. Nanofluids are complex mixtures of nanoscale solid particles (1-100 nm) with heat transfer fluids. Conventional heat transfer fluids (e.g., water, glycols, refrigerants, oils, etc.) have very low thermal conductivities. This restricts the thermal phenomena, resulting in poor thermal efficiencies and exergetic outputs. When nanofluids are designed to have high thermal conductivity nanoparticles, they exhibit higher thermal conductivities than those of conventional heat transfer fluids (Mahbubul 2019).

The first publication with the term “nanofluid” appeared online in 1995 by the pioneering work of Choi and Eastman at Argonne National Laboratory, USA (Choi and Eastman 1995). The promise of nanofluids has been realized and currently, more than 29,000 articles can be reached via a Google Scholar search with “nanofluid” in the title. Mostly these titles involve the preparation, characterization, thermophysical properties, heat transfer analysis, and applications of nanofluids. All of these topics are within the interest of the Journal of Energy and Thermofluids Engineering, ETE.

The nanofluids field attracts multi-disciplinary interest research-wise while the material nanofluids have had a rather long laboratory-scale existence, still not being commercialized as new-generation heat transfer fluids. The potentials carried by nanofluids are accompanied by certain reasons slowing down their industrialization. In order for nanofluids to become commercial products, the procedures relate to nanofluids need to be standardized. This starts with laboratory procedures from preparation to experiments performed. The switching cost to be faced by the industrial fields as well as industry professionals should be precisely addressed. This requires performing elaborate research along with communicating with the industry segments to know their expectations from new generation heat transfer fluids. In the first step, sharing the scientific efforts on nanofluids with all related parties is important, and is among the primary objectives of the journal Energy and Thermofluids Engineering, ETE.

## About the Second Volume

There are a total of five papers in the 2nd volume of Energy and Thermofluids Engineering, ETE; with one combined issue (i.e. Issue 1-2). All papers have undergone rigorous single-blind peer review, with an acceptance rate of 48% since the launch of the journal. In this 2nd volume, four articles are based on computational/numerical analysis (Redu et al., 2022; Benharkat, 2022; Hamja et al., 2022; Bousbaa et al., 2022) and one review paper (Shahria et al., 2022). The authors/co-authors of these papers are from Algeria, Bangladesh, and the USA. The statistics reveal the international appearance and recognition of the Journal.

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ENERGY AND THERMOFLUIDS ENGINEERING | ETE | ISSN 2716-8026 (PRINT)
Available online May, 2023 at https://asps-journals.com/index.php/ete
https://doi.org/10.38208/ete.v2.738

## Acknowledgment

On behalf of the editorial team of ETE, we would like to thank all authors, readers, reviewers, editors, copyeditors, the manager, admin, director, and production teams for their valuable contributions to this Journal. The following experts have served as referees for the manuscripts submitted to Energy and Thermofluids Engineering during the preparation of the second volume and/or have been copyeditors of the accepted manuscripts:

**ABM Abdul Malek**, *Shahjalal University of Science & Technology SUST, Bangladesh*

**Ayşe Uğurcan Atmaca**, *Dokuz Eylul University, Turkey*

**Elif Begum Elcioglu**, *Eskişehir Technical University, Turkey*

**Ersin Alptekin**, *Dokuz Eylul University, Turkey*

**Fatsah Mendil**, *University Abderrahmane Mira of Béjaïa, Algeria*

**Md Tanwir Alam**, *Maulana Mukhtar Ahmad Nadvi Technical Campus, India*

**Md. Azhar**, *Maulana Mukhtar Ahmad Nadvi Technical Campus, India*

**Md. Sanwar Hossain**, *Bangladesh University of Business and Technology (BUBT), Bangladesh*

**Mehedi Hasan Tusar**, *Chittagong University of Engineering & Technology (CUET), Bangladesh*

**Mohammed Mahbubul Islam,** *Dhaka University of Engineering & Technology (DUET), Bangladesh*

**Mounir Amokrane**, *Mouloud Mammeri University of Tizi Ouzou, Algeria*

**Naseeb Khan**, *Shadan College of Engineering and Technology (SCET), India*

**Nur Çobanoğlu**, *İzmir Kâtip Çelebi University, İzmir, Turkey*

**Şahin Güngör**, *Izmir Katip Celebi University, Turkey*

**Serkan Doğanay**, *Izmir Katip Celebi University, Turkey*

**Sheikh Khaleduzzaman Shah**, *University of Melbourne, Australia*

**Y. Raja Sekhar**, *Vellore Institute of Technology, India*

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