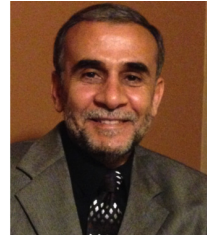


EDITORIAL

Journal of Advanced Thermal Science Research (JATSR) is a peer-refereed online journal that publishes high-quality articles in the field of thermal science. The aim of this journal is to provide a platform for scientists and engineers all over the world to discuss various new developments in different areas of thermal science. This journal is published twice a year by **Avanti Publisher**. The journal will publish original articles, review articles, technical notes, and short communications, related to the field of thermal science.



On the behalf of the editorial board members of the **Journal of Advanced Thermal Science Research**, it is my pleasure to welcome you to the first issue of this the journal. This inaugural issue of the **JATSR**, Vol. 1, Issue 1, includes four peer-refereed original articles, from authors representing four countries: Spain, Romania, India, and Turkey. On behalf of editorial board members, and myself I wish to express my sincere gratitude to the authors of the articles for their willingness to disseminate their research achievements through this journal.

The first paper of this issue is A Parametric Study of Heat Transfer for the Optimization of Fin Sinks by Blanco *et al.* In this study, the authors developed a design tool called “Opti-fin” for a Matlab © environment that allows the user to configure a fin on the basis of the material and the thermal heat that will be released. Their study also includes a realistic estimation of fluid (air) flows that control the temperature dependency of the fin. This tool has been validated by computational fluid dynamic simulations using ANSYS-FLUENT®, in which the results of the simulation and the actual triangular shaped fin showed a remarkable similarity.

The second article is Contact Photothermal Techniques for Thermal Characterization of Liquids by Dadarlat. Two contact photothermal techniques, the well-known photopyroelectric calorimetry, and a recently introduced photothermoelectric, are proposed for thermal inspection of some liquid samples. The paper contains a summary of the recent results and a comparison of the investigations performed with the previously mentioned techniques for the measurement of the dynamic thermal parameters (thermal diffusivity and effusivity) of some liquids of interest: magnetic nanofluids with transformer oil as carrier liquid and various concentrations of magnetite (Fe_3O_4) nanoparticles. For both techniques, the same detection configurations have been used: (i) the front detection configuration, together with the thermal-wave resonator cavity (TWRC) method as scanning procedure, was used to measure the value of thermal effusivity; (ii) the back configuration, together with the same TWRC technique, leads to the direct measurement of thermal diffusivity. The main theoretical aspects of the particular detection cases for

both techniques are described and the performances (advantages and limitations) of the methods are analyzed.

The third manuscript is Cold Flow Simulation in Underground Coal Gasification (UCG) Cavities by Chatterjee *et al.* A comprehensive three-dimensional numerical study is conducted to understand the hydrodynamics within a given cavity size which would give a relatively quick but reliable insights into the process. Five different cavity sizes are considered inside which the complete turbulent transport is simulated. Apart from the usual vertical and horizontal injection, the effect of inclined injection on the hydrodynamics is also reported here for the first time.

The fourth and last paper of this issue is Structural Evolution Properties of Cu-25 wt %Sn Alloy During Ball Milling by Arslan. In this study, Cu-25 wt %Sn alloy samples were prepared by the mechanical alloying process using planetary high-energy ball mill. The alloy formation and different physical properties associated with their formations were investigated as a function of milling times of 0, 10, 20, 70, 80, 100, 120, 150 and 200 h by means of the x-ray diffraction (XRD) technique, scanning electron microscopy (SEM) and differential scanning calorimeter (DSC).

Finally, on behalf of editorial board members, I would like to express our special thanks to the referees, who have committed their valuable time and effort to refereeing the articles included in this issue.

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Co-Editor-in-Chief

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