

Editorial

Journal of Innovations in Materials and Manufacturing Engineering: Founding a New Journal

Lawrence E. Murr^{1,2}

¹ Department of Metallurgical, Materials and Biomedical Engineering, University of Texas at El Paso, El Paso, TX 79968, USA; lemurr@utep.edu

² W. M. Keck Center for 3D Innovation, University of Texas at El Paso, El Paso, TX 79968, USA

How To Cite: Murr, L.E. Journal of Innovations in Materials and Manufacturing Engineering: Founding a New Journal. *Journal of Innovations in Materials and Manufacturing Engineering* 2026, 1(1), 1.

Why another journal? A quick check on Google will show that there are currently an estimated 25,000 to 40,000 active, peer-reviewed journals world-wide. In addition to the many independent peer-reviewed journals, many scientific and engineering societies publish or sponsor journals as a means to enhance communication and scholarly discussion among their memberships. In fact, journals were historically established to facilitate scholarly communication and interaction on topical areas or emerging fields of study, starting with the Philosophical Transactions of the Royal Society (London, UK) established in 1665. Roughly 50 billion scientific and technical papers have been published world-wide since the 17th century; nearly 5 million alone in 2022, increasing by ~5% each year since. Major publishing organizations currently include Springer, Taylor & Francis and Elsevier who combined publish nearly 7500 to 8000 journals annually.

Over the past half-century, academia's publication requirements, in particular, force researchers to exercise the development and dissemination of knowledge, since advancement is usually predicated on an established publication record which has become quantified in terms of an h-index that includes the number of publications and their citation record. Journals themselves have become quantified with a similar metric called the impact factor (IF) which also depends on the number of published papers and their citation frequency (which is also given a CiteScore), along with a quartile (Q) ranking for journals within a specific field or fields of study. As a consequence, researchers often select journals for publishing their work based on these metrics as well as the publication fees charged (manuscript processing charges) by the journal to provide open access for their published work. Journal impact factors can exceed an IF of 40 (Nature (UK) for example), while the manuscript processing charge (MPC) can exceed \$3500 (US) for many popular journals; even those with impact factors (IF) < 3. Many journals that have become very successful in terms of a high IF and many hundreds of manuscript submissions monthly, often impose unilateral rejection of excellent papers from outstanding researchers using vague and sometimes arbitrary criteria to limit the issue size.

There are currently roughly a dozen well-regarded journals devoted to publishing materials and manufacturing-related research papers, particularly additive manufacturing and variations of 3D printing, even combining a focus on materials science of additive and related manufacturing areas such as friction-stir processing and welding among others. Many authors of research papers, including the author, select journals with a reliably large readership, along with the journal metrics, to assure a wide exposure to the new knowledge being presented; including peers in the field of study.

In view of the foregoing considerations, why a new journal? The *Journal of Innovations in Materials and Manufacturing Engineering (JIMME)* to be debut here, is an international, peer-reviewed and open access journal which aspires to enhance interactive discussion and knowledge dissemination involving novel and innovative progress in understanding new and existing materials and manufacturing engineering developments, especially as these apply to manufacturing processes and applications. An emphasis will also include materials characterization methodologies as these provide insights into the influence of structure and properties on manufacturing processes and product performance. The general and initial Aims and Scope of *JIMME* are as follows:



AIMS

Journal of Innovations in Materials and Manufacturing Engineering (JIMME) is an international, peer-reviewed, multidisciplinary journal that provides a platform for disseminating high-quality original research and critical reviews in materials and manufacturing engineering. The journal serves both the academic and industrial communities, fostering the exchange of cutting-edge knowledge and innovations. It aims to highlight contemporary advances and future developments, with particular emphasis on the practical applications of novel materials and manufacturing technologies. It is published quarterly online by Scilight Press, Melbourne, Australia.

Scope of the Journal

JIMME covers a broad range of topics encompassing new materials, processes, and technologies applied to manufacturing engineering and product development, with special focus on innovations in additive manufacturing and related emerging processes. Topics of interest include, but are not limited to:

- Novel materials development, synthesis, applications, and methodologies in advanced manufacturing processes, particularly across the full spectrum of 3D printing technologies.
- Multifunctional material and device design, covering metals and alloys (including high-entropy alloys, superalloys, and superplastic alloys), composite materials, electronic and optical materials, nanomaterials, biomaterials, 2D materials, and other advanced material systems.
- Innovations in materials processing, including hybrid and multi-material manufacturing approaches.
- Characterization, optimization, and simulation of materials and manufacturing processes, with an emphasis on modelling, artificial intelligence-driven design, and digital manufacturing applications

The *Journal of Innovations in Materials and Manufacturing Engineering* will strive to be not just another journal, but to serve as an expanded forum for researchers and practitioners in academia, government and industry world-wide, to catalyze innovations in materials and manufacturing engineering, especially the synergy between advanced materials development and manufacturing technology implementation. In some respects, these aspirations are reflected in the diversity of the journal's Editorial Board. The journal will waive the manuscript processing charge for open access publication for the first 2 years. This should provide an incentive and opportunity to publish excellent research papers without considering cost to publish, allowing even unsupported research programs to have a platform for presenting their findings and innovations. The journal will publish 4 issues annually. We encourage contributions of novel and innovative research that will eventually lead to the journal's success and provide an effective platform for enhanced dialogue and discussion, as well as a repository of new knowledge from diverse research fields.

Join us in this effort to provide an exciting, multidisciplinary venue for encouraging innovations in materials, materials science and engineering, and manufacturing engineering developments and applications world-wide. Manuscripts presenting innovative research are most welcome from academia, government, and industry scientists and engineers.

Conflicts of Interest

The authors declare no conflict of interest.