

# The Journey Continues

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Editor-in-Chief



Welcome to the first issue of JM<sup>3</sup> under its new title *Journal of Micro/Nanopatterning, Materials, and Metrology*!

The plan described in the editorial in the April 2020 issue, to split JM<sup>3</sup> into two journals to improve focus on the technical communities served, has now been implemented. It is intended that this journal, with a new name but continuing under the moniker JM<sup>3</sup>, will be a resource for engineers engaged in patterning for producing semiconductor electronics, while the new *Journal of Optical Microsystems* will be focused on the science and engineering of integrated photonic and optical systems.

Although this change represents a conscious narrowing of the scope of JM<sup>3</sup>, the range of topics of interest to patterning engineers continues to expand within that scope, reflecting on-going changes in patterning technology and the semiconductor industry. It has become increasingly important for patterning solutions to involve multiple processes, so a large amount of information is needed to create these solutions and control them in manufacturing. In this regard, JM<sup>3</sup> is a useful resource. Well-written papers that meet the standards of our peer-review process can help readers stay abreast of the latest developments in patterning technology. This includes papers on new aspects of foundational patterning technologies, such as resists, masks, computational lithography, and exposure systems, but may also involve relatively new subjects, such as deep learning. Papers on new topics in patterning that are relevant to the semiconductor industry are welcome to JM<sup>3</sup>.

Lithography and reactive ion etching are manufacturing technologies, so it is natural that many authors are from companies in the semiconductor industry, while the extraordinary complexity of advanced patterning makes the engagement of researchers from universities and research laboratories a necessity. It is hoped that JM<sup>3</sup> can provide a forum where various groups can exchange ideas on topics of common interest. Of course, new concepts are often first presented at lithography conferences, but it is difficult to go into detail during presentations or in conference proceedings papers. Ideas introduced at lithography conferences can be described in more detail in a JM<sup>3</sup> article, and expanded versions of SPIE proceedings papers are welcome as submissions to JM<sup>3</sup>.

In consideration of the diverse affiliations of contributors, JM<sup>3</sup> will continue to offer an open access option for authors who prefer it or who are required to publish with open access by their sources of funding. It is also recognized that authors have varying constraints on what information they can disclose. Nevertheless, certain minimum levels of disclosure are needed to maintain the quality of a peer-reviewed journal. To provide clarification to authors and reviewers, we are developing disclosure guidelines. Such guidelines for lithographic materials were described in the July 2020 issue of JM<sup>3</sup> and are now available in the author guidelines section of the JM<sup>3</sup> website. Additional guidelines for other topics, such as lithography equipment, metrology, and computational lithography, will be added to the author guidelines as soon as they are available.

The world's appetite for semiconductor electronics continues to grow, and patterning technology remains central to the production of integrated circuits. JM<sup>3</sup>, in its latest embodiment, is here to support the advancement of vital and evolving patterning technologies.