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# *Advanced Etch Technology for Nanopatterning V*

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*Editors*

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# Introduction

This proceedings volume contains accepted papers from the SPIE conference on *Advanced Etch Technology for Nano-patterning V* (The SPIE Etch conference) held as part of the International Symposium on *Advanced Lithography*, 21–25 February 2016, in San Jose, California, United States. These proceedings papers cover the latest advances in the wide field of etch and nano-patterning technology and offer a glimpse of the state-of-the-art of this important field of semiconductor technology.

This year's SPIE Etch conference continued the fine tradition of having a wide international representation and attracted many researchers from related fields. As in previous years, our conference lasted two days, with the papers divided into six sessions (listed below) which continued to garner tremendous interests among conference attendees.

- Overviews of Nano-Patterning Challenges
- New Plasma Sources and New Etching Technologies
- Nano-Patterning for Advanced Logic and Memory Technology Nodes
- Patterning Integration Schemes (multilayer patterning, self-aligned patterning, etc.)
- Patterning Materials and Etch: Joint Session with conference 9779
- Emerging Patterning Technologies (DSA, and others)

This year, the Etch conference hosted a well-attended joint session on Patterning Materials and Etch with the Advances in Patterning Materials and Processes conference 9779. The overview session of the Etch conference drew very big crowds, where some of the most important fundamental issues faced in the world of nano-patterning and etch were discussed.

We hope that this proceedings volume proves valuable to the many patterning scientists and engineers working in the fast-moving semiconductor industry. We also hope that it serves as a useful reference for those who are interested in nanofabrication, micro- and nano-fluidics, micro- and nano-photonics, Micro-Electro-Mechanical Systems (MEMS), BioMEMS, organic electronics, advanced packaging, and bio-chips.

We thank the authors, particularly the invited speakers, for their valuable contributions to the conference and proceedings volume. The SPIE Etch conference is highly regarded among the worldwide patterning community simply because of the high quality of our talks and proceedings papers.

We also thank members of the organizing committee for their dedication and hard work to help maintain a high quality of this conference. We are also grateful to LAM Research Corporation (United States) for their generous financial support. Finally, we extend our sincere thanks to the SPIE staff for their tireless efforts and their meticulous organizational skills in helping make this year's SPIE Etch conference a success and in assembling and publishing this proceedings volume.

**Qinghuang Lin**
**Sebastian U. Engelmann**