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Please use the following format to cite material from these proceedings:


ISSN: 0277-786X
ISSN: 1996-756X (electronic)
ISBN: 9781510613768

Published by
SPIE
P.O. Box 10, Bellingham, Washington 98227-0010 USA
Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445
SPIE.org
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Naoya Hayashi, Dai Nippon Printing Company, Ltd. (Japan)
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Naoya Hayashi, Dai Nippon Printing Company, Ltd. (Japan)

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Mask/OPC Interactions
Paul A. Morgan, Micron Technology, Inc. (United States)
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Douglas J. Resnick, Canon Nanotechnologies, Inc. (United States)
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Introduction

The 2017 SPIE Photomask Technology Conference was held September 11-14 in Monterey, California, co-located for the first time with the EUV Lithography Conference. The organizers of these two conferences recognized their synergy and thought that a united conference would have value greater than the two held separately. Indeed, the combined conference integrated naturally and the increased attendance gave the conference a momentum not experienced in years. Since their first date went so well, these two conferences are expected to remain together for the foreseeable future.

EUV lithography readiness for high volume production was the overriding theme of the conference with joint sessions on EUV readiness, pellicles, and inspection/metrology. A joint panel discussion explored options and strategies for early EUVL insertion without initial actinic inspection availability. The general consensus of the panelists and attendees was that this was not a technical barrier but did have a large impact on complexity, cost, and cycle time.

Machine Learning is gaining more and more attention as organizations attempt to make sense of the huge amount of data collected in the process of manufacturing masks and integrated circuits. This year, for the first time, Photomask Technology included a Machine Learning session that explored use models and applications for this exciting emerging data analysis technology. Papers from the conference, covering the latest progress in all areas related to photomasks, follow in this proceedings.

Peter D. Buck
Emily E. Gallagher