

Advances in Patterning Materials and Processes XXXVI

This conference has an open **call for papers**:

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Important Dates

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Abstract Due:
29 August 2018

Manuscript Due Date:
19 January 2019

Additional Conference Information

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Call for Papers

The Advances in Patterning Materials and Processes conference is the leading forum for scientists and engineers from institutes, material as well as equipment vendors, and end-users around the world to present and discuss research on the chemistry, physics, and performance of photoresists as well as other patterning materials and processes. Evolutionary and ultimately revolutionary innovations will continue to be required in resist materials and patterning processes in order to achieve the combination of resolution, edge roughness, and sensitivity required for future technology nodes. This conference welcomes submissions of original papers that emphasize recent advances in high-performance patterning processes and materials and their integration in established, maturing, emerging, and new lithographic technologies.

Original technical papers are solicited, but not limited to the following topics:

Patterning Materials, Processes and Applications

- photoresists for EUV and 193nm (immersion) lithography
- photoresists for other wavelengths: electron beam, 248nm, i-line, and g-line
- novel development techniques: positive and negative tone (PTD, NTD) resists and developers
- self-assembling materials (DSA): chemistry & materials science, processing, and ancillary materials
- selective deposition of organic and inorganic materials: chemistry, processing, and materials science
- multi-layer patterning materials: underlayers for reflection control, planarization, pattern transfer, and process enhancement
- materials for photonic applications, NEMS, MEMS and MOEMS
- materials for packaging and SOC/SIP integration.

Processing and Process Control

- single and multiple patterning
- resist smoothing, rectification, trim and shrink, and tone inversion
- applied processing, including filtration, defect control, and pattern collapse mitigation
- materials challenges related to etch, process control and metrology
- new processing techniques and applications, especially self-aligned strategies.

Simulation and Modeling

- resist fundamentals and assessment of patterning and materials scaling limits
- variability, stochastics, and pattern formation
- design-for or simulation-of new processes and applications
- AI and ML approaches to materials design, characterization, patterning and process control.

Consistent with the conference's charter and goals, authors are required to provide a description of chemical and physical principles as well as sufficient chemical structural detail in presented work. Submissions which do not reveal sufficient chemical details so as to add value to the readers or are principally of a commercial nature may not be accepted for presentation and publication.

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