1. Title:	Effect of photoacid generator concentration on the performance of a model EUV photoresist
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3. Abstract body:

Current EUV photoresist materials do not yet meet requirements on exposure-dose sensitivity, line-width roughness, and resolution. In order to quantify the trade-offs in materials properties and processing steps, fundamental studies are required that consider these EUV-resist specific problems. In this presentation, model EUV photoresists are studied to quantify the influence of photoacid generator (PAG) loading on EUV lithographically printed images. The latent image and developed line-space pattern were examined for critical dimensions and pattern density for features ranging from (40 to 100) nm by combined methods. An atomic force microscopy technique examined the chemical and height latent image for critical dimensions and line-edge quality. These results are then correlated to the developed image using varied developer strengths and characterized by top-down SEM. Finally, these EUV lithographic imaging results are correlated to fundamental studies of the swelling and dissolution behavior examined by quart crystal microbalance. These EUV photoresist fundamentals address the effects of sensitivity through the ionic perfluorobutanesulfonate PAG loading as well as developer fundamentals on line-width roughness.