



1. Title:	Study of extreme ultra-violet photoresist quality for 32 nm pattern formation
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3. Abstract body:

Extreme ultraviolet lithography (EUVL) is one of the patterning technologies proposed for the next generation lithography which can make patterns less than 45 nm critical dimension. In order to make minute patterns, it needs different methods from the present one. So we must investigate the EUV source, mask and exposure tool. Although the photoresist information, which is one of the key issues to define the smaller patterns, is important, it is not much known to apply for EUVL. The information about many process factors of photoresist affects pattern formation. To obtain better results, we have to get the exact information about many resist parameters such as Dill ABC exposure parameters, post exposure bake and develop parameters, etc. We can compare simulation result with experimental result, and we can check the accuracy and apply to formulation of resist. In this paper, we will discuss about each parameter, such as refractive index n and k , Dill ABC parameters and so on. We will also discuss about several quantities of resist in order to make 32 nm pattern. Furthermore we will apply new parameters to the development of new resist and process of EUVL. We used SOLID-EUV simulator of the SOLID-C.