



1. Title:	Anionic PAG bound photoresists for EUV
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3. Abstract body:

A new series of functionalized anionic PAGs, as well as corresponding polymers were prepared in moderate to good yield and characterized. The thermostability of PAG bound polymers was superior to PAG blend polymers, the fluorine-free PAG bound or blend polymers exhibited higher stability than fluorine-substituted PAG bound or blend polymers. Although the acid generating efficiency of PAG blend polymers was higher than that of PAG bound polymers, yet it is anticipated that PAG incorporated into the polymer main chain may improve acid diffusion compared with the PAG blend polymers. E-beam sensitivity and resolution tests showed 50 nm 1 : 2 grating resolution were achieved with fluorine-substituted PAG bound or blend polymer system, and 50 nm 1:1 grating resolution could be achieved when DBU base quencher was used. Additional work on EUV lithography imaging and outgassing will be presented.