Comparative Quenchers 1 to 7 of the Following Structural Formulae

[0176]

Comparative Quencher :
$$H_2N \longrightarrow I$$

-continued

Comparative Quencher 7

Blend Quenchers 1 to 3 of the Following Structural Formulae

[0177]

Comparative Quencher 3

Comparative Quencher 6

Blend Quencher 1

Blend Quencher 2

Blend Quencher 3

(2) EUV Lithography Test

[0178] Each of the resist compositions in Tables 1 to 4 was spin coated on a silicon substrate having a 20-nm coating of silicon-containing spin-on hard mask SHB-A940 (Shin-Etsu Chemical Co., Ltd., silicon content 43 wt %) and prebaked on a hotplate at 105° C. for 60 seconds to form a resist film of 60 nm thick. Using an EUV scanner NXE3300 (ASML, NA 0.33, σ 0.9/0.6, quadrupole illumination), the resist film was exposed to EUV through a mask bearing a hole pattern at a pitch 46 nm (on-wafer size) and +20% bias. The resist film was baked (PEB) on a hotplate at the temperature shown in Tables 1 to 4 for 60 seconds and developed in a 2.38 wt % TMAH aqueous solution for 30 seconds to form