

図6-26 Cu配線の抵抗率と結晶粒径に及ぼす硫酸銅純度と添加剤の影響

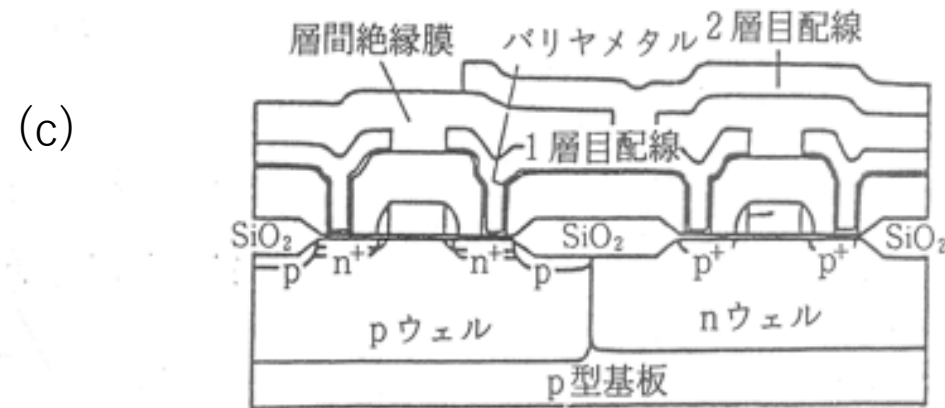
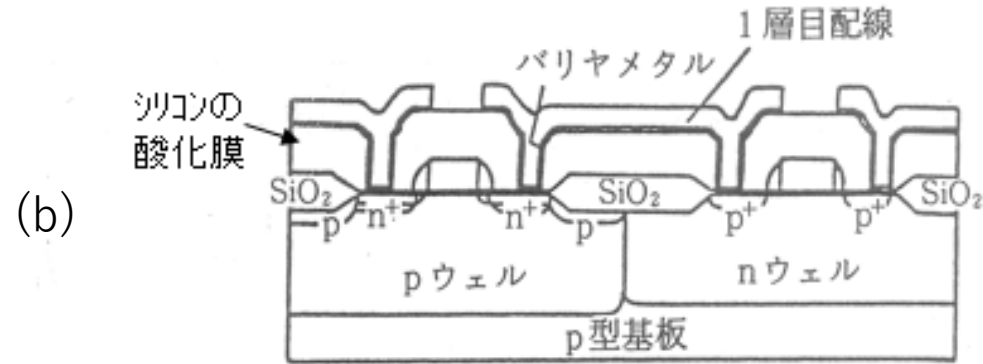
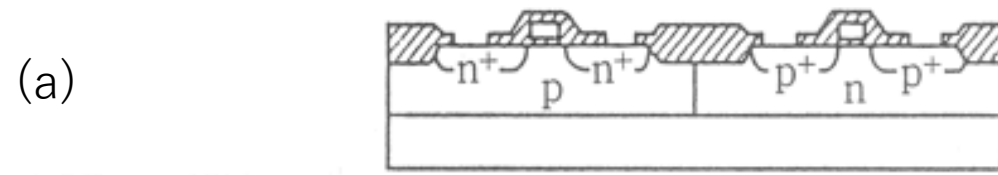
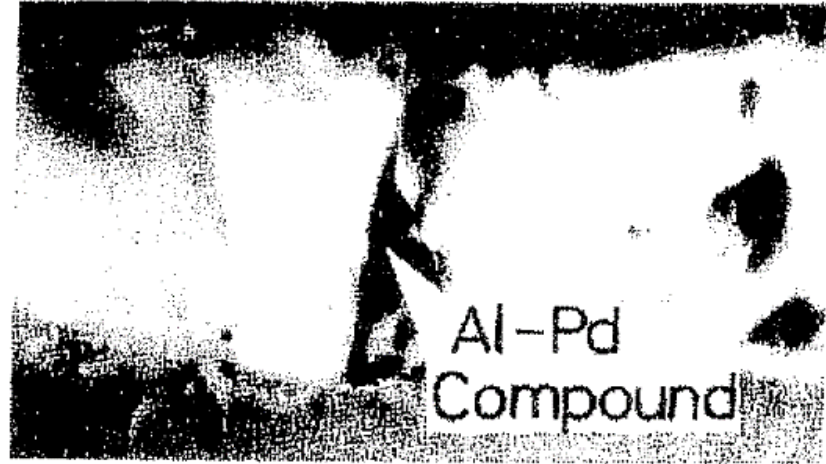
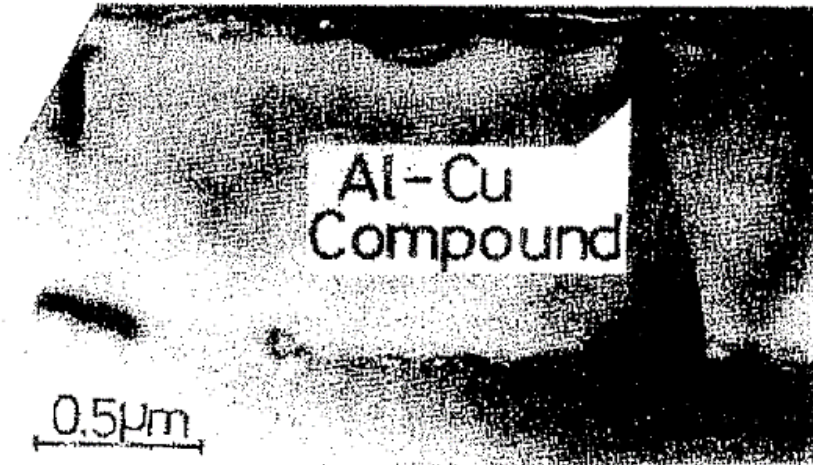


図6-26 Al配線プロセス



(a)



(b)

図6-27 Al-0.3wt%Pd-1wt%Si (a)およびAl-0.5wt%Cu-1wt%Si合金配線(1.3  $\mu$ m) (b)の透過電子顕微鏡写真

(a)Al-0.3wt%Pd-1wt%Si (b)Al-0.5wt%Cu-1wt%Si

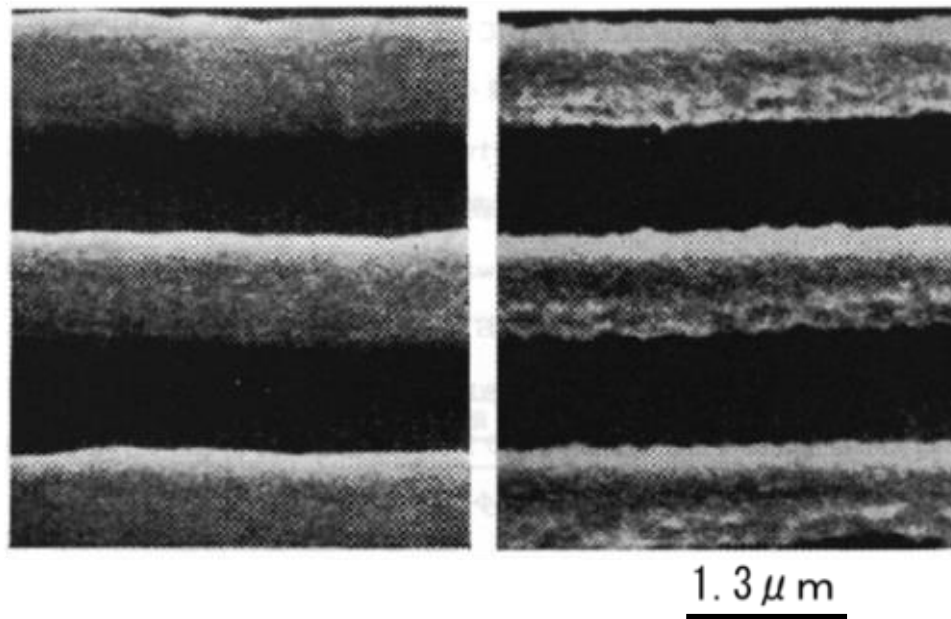


図6-28 ドライエッチング後のSEM写真

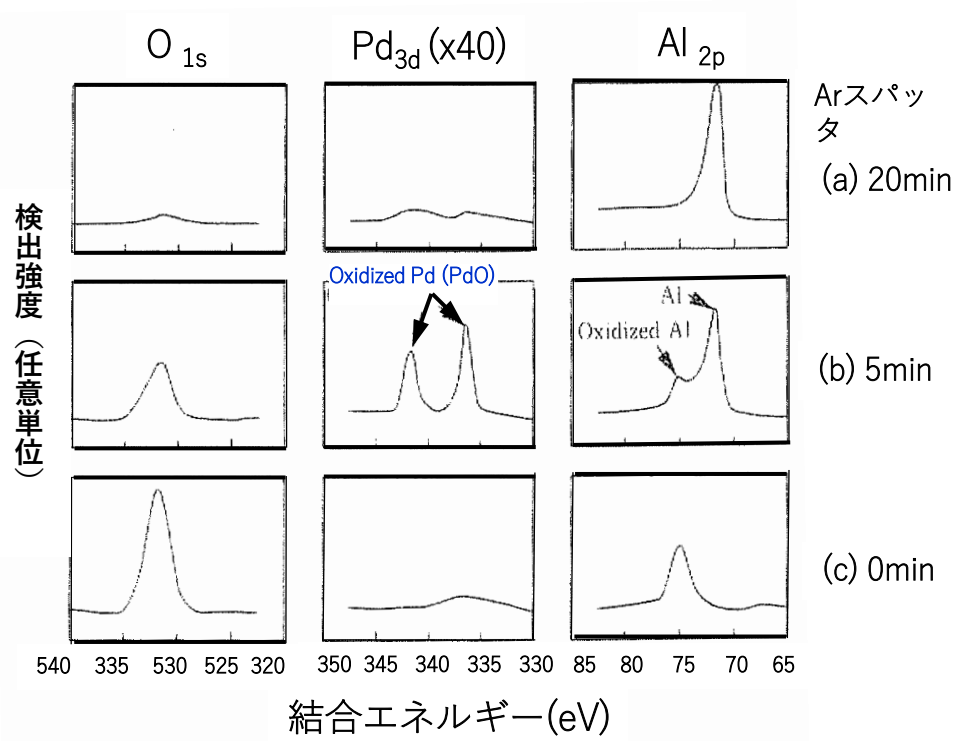


図6-29 Al-0.3wt%Pd-1wt%Si合金膜のESCAプロファイル

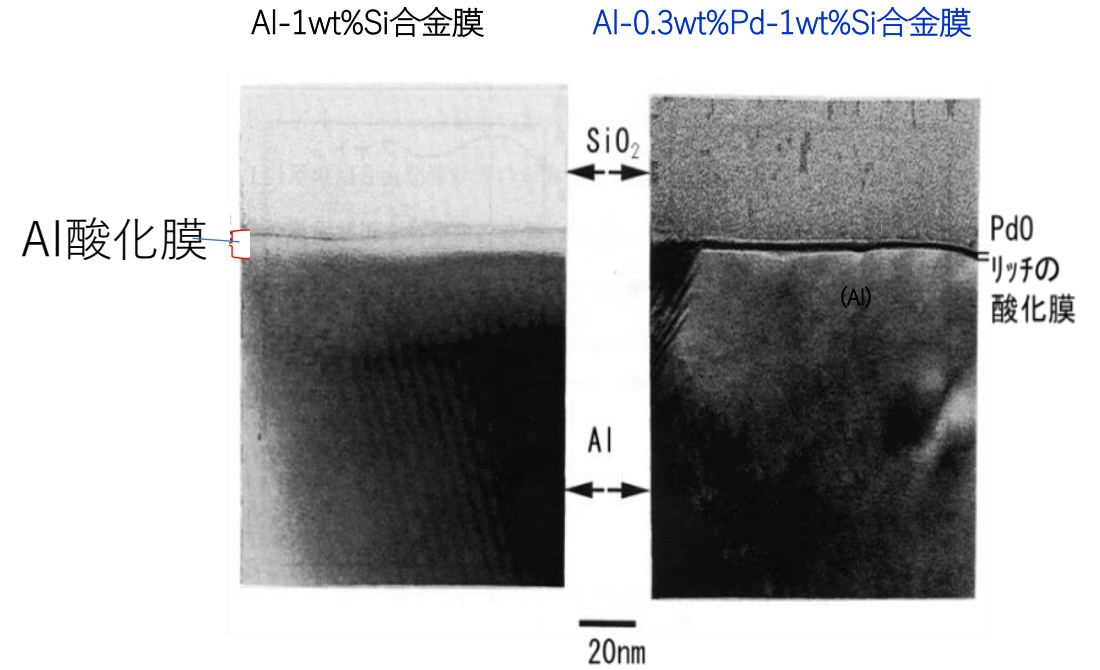


図6-30 Al-1wt%SiおよびAl-0.3wt%Pd-1wt%Si合金膜のAl酸化膜とAl基地との界面のTEM像