

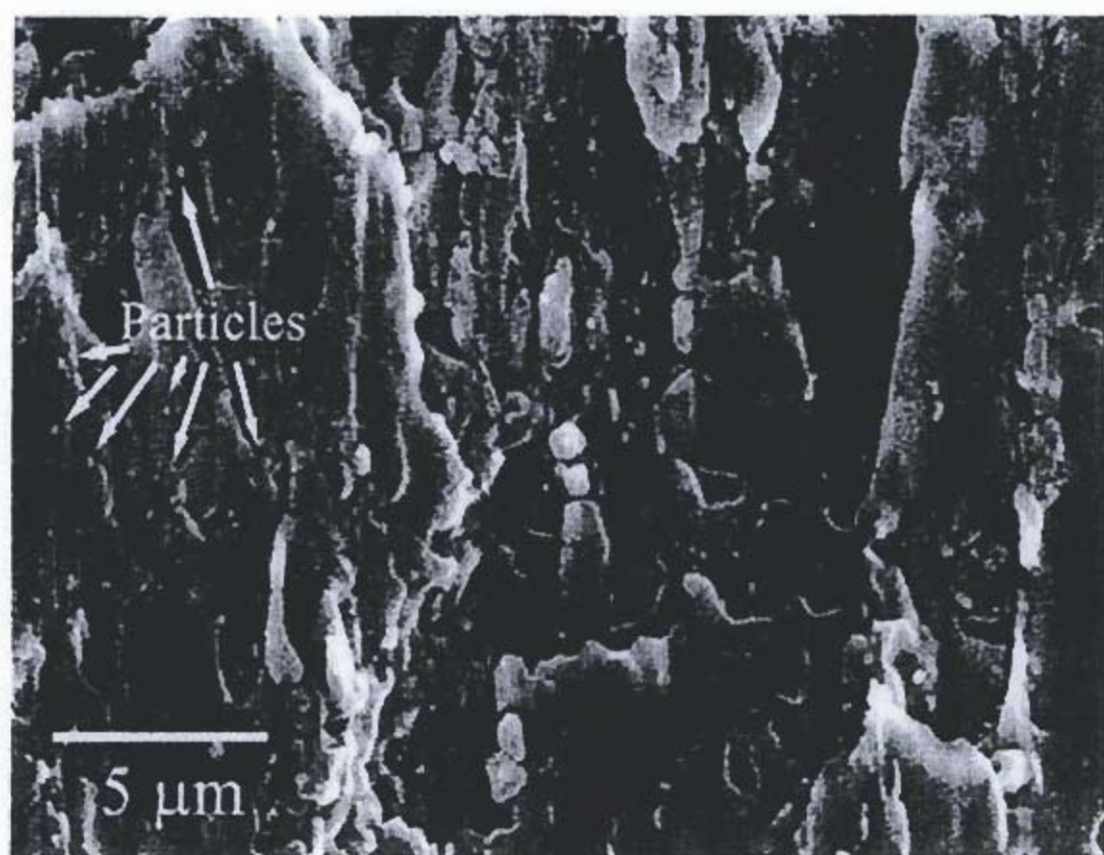


FIGURE 1

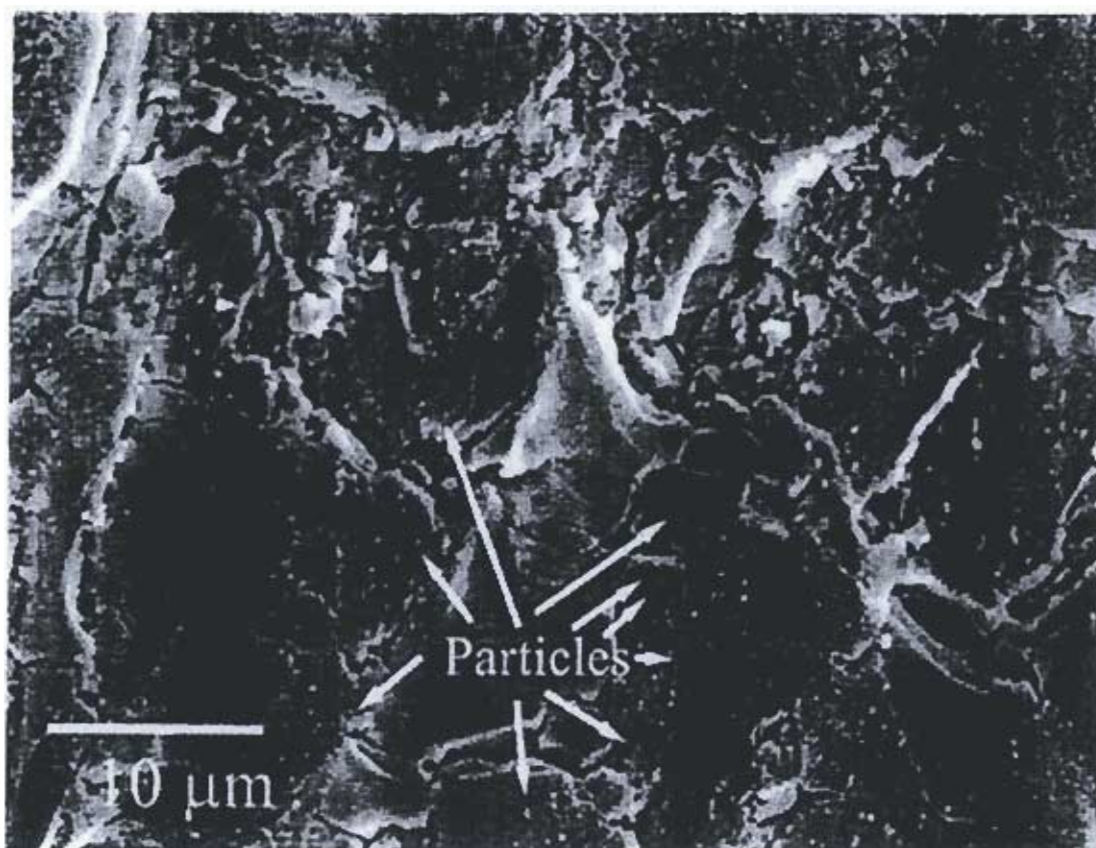


FIGURE 2

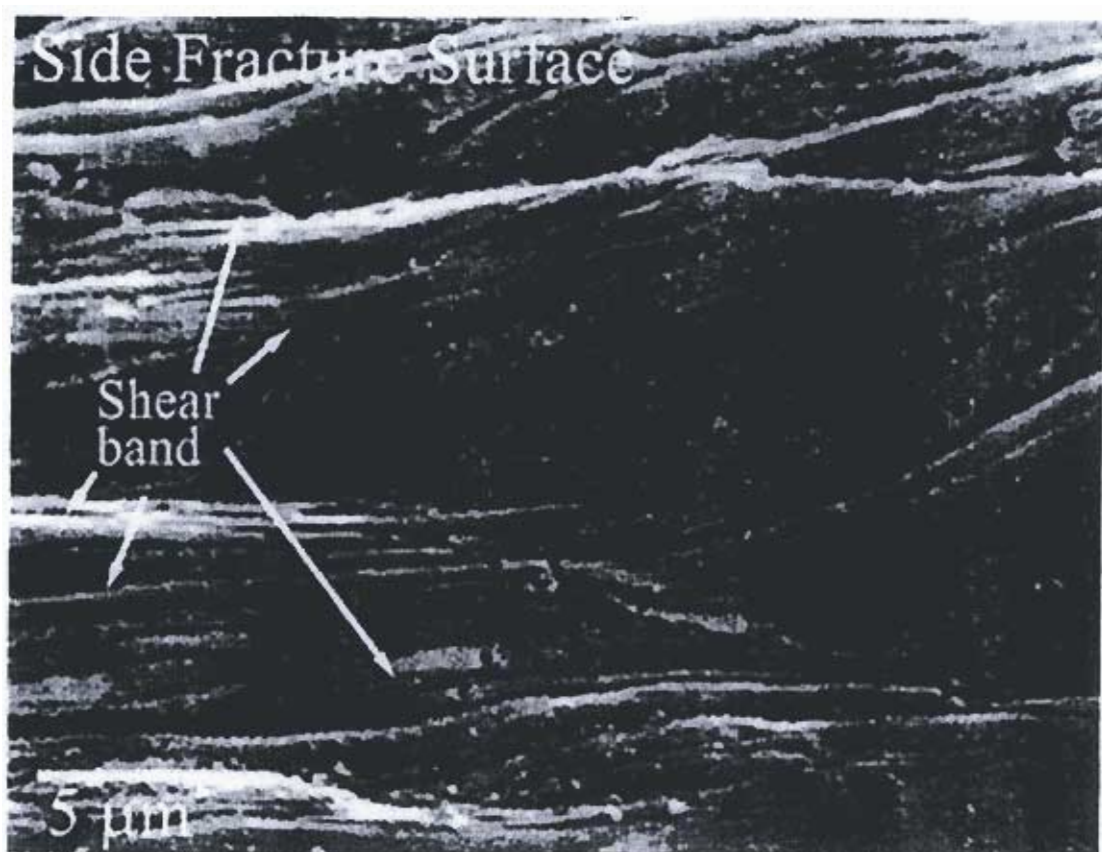


FIGURE 3

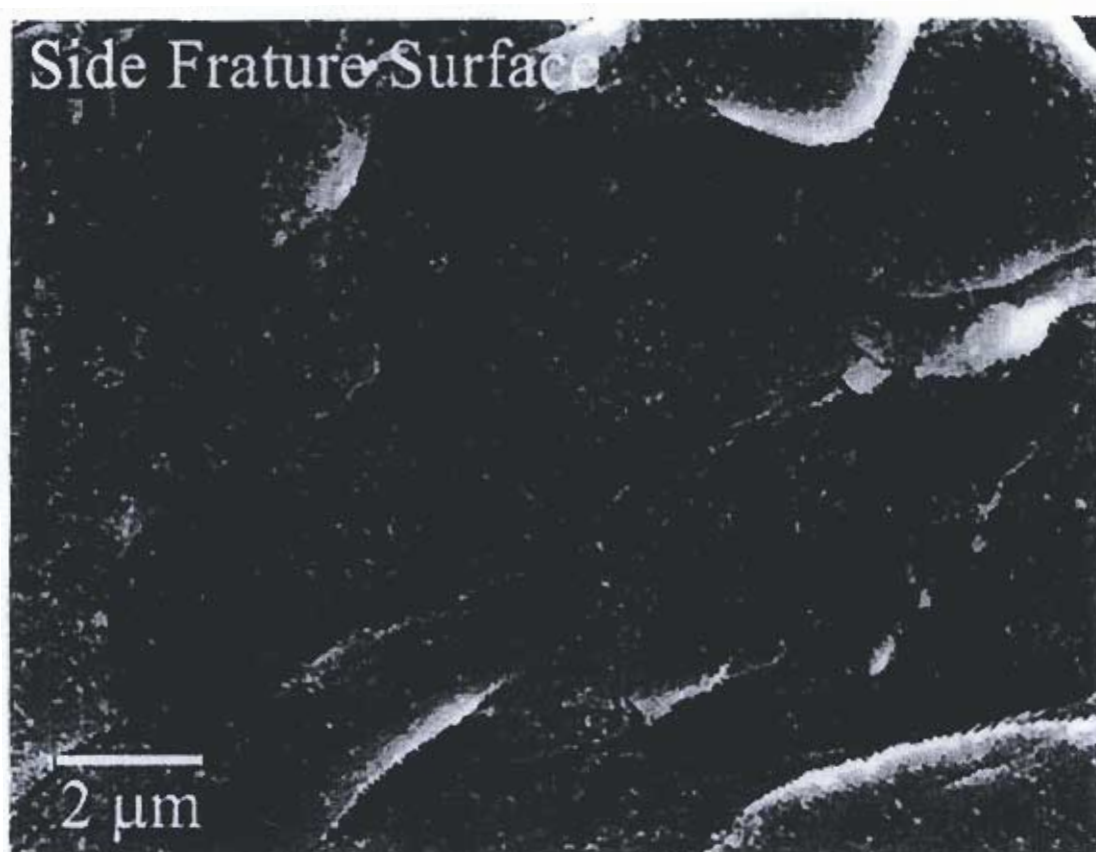


FIGURE 4

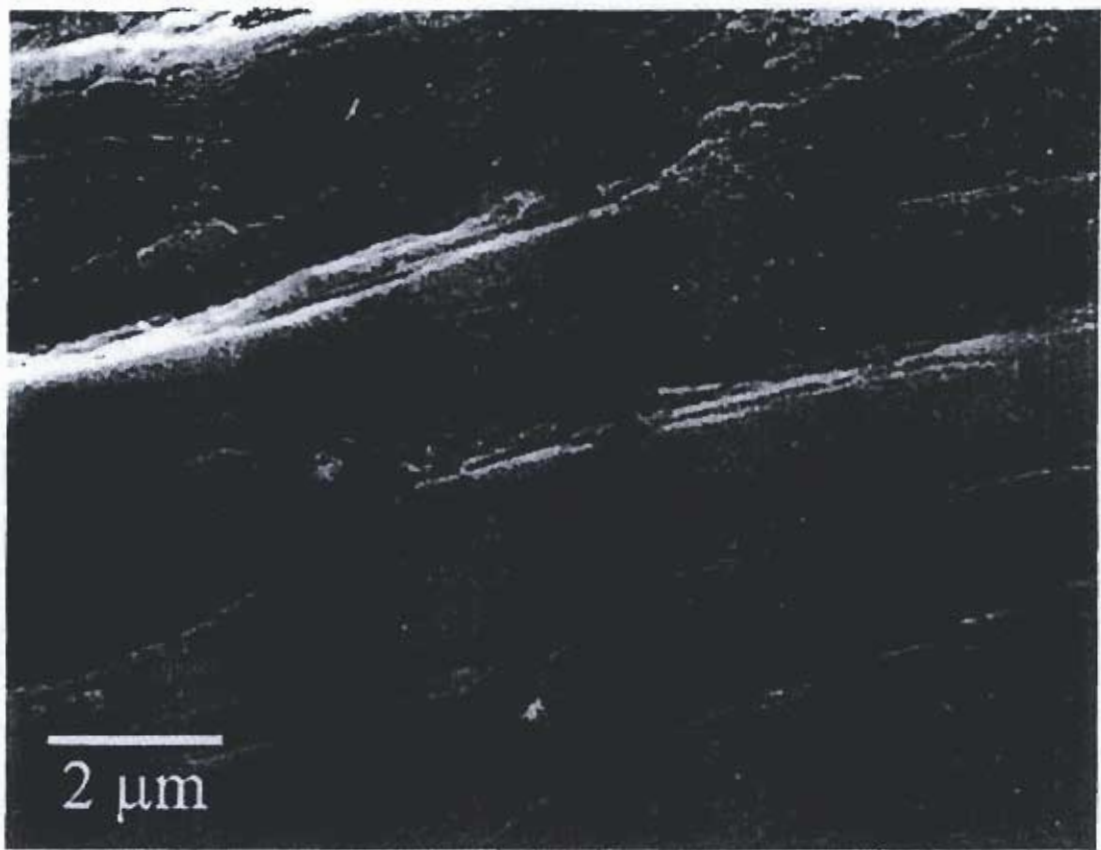


FIGURE 5

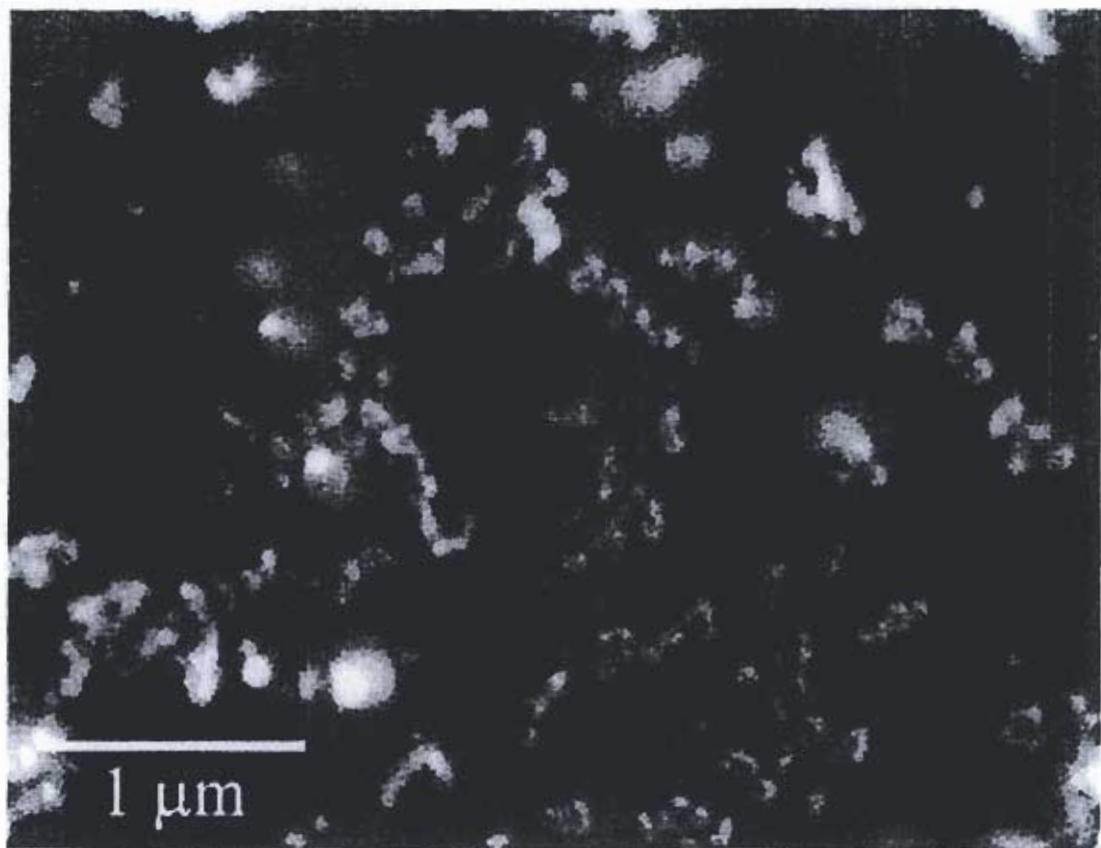


FIGURE 6

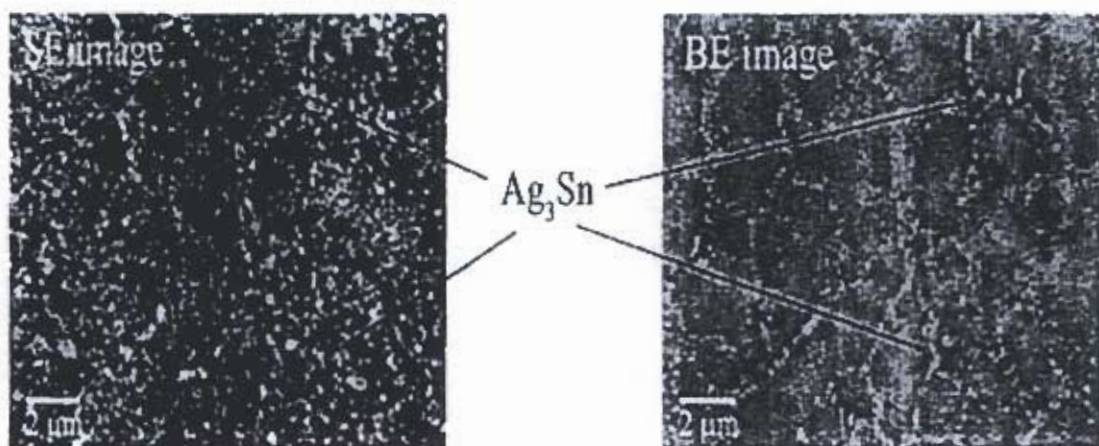


FIGURE 7

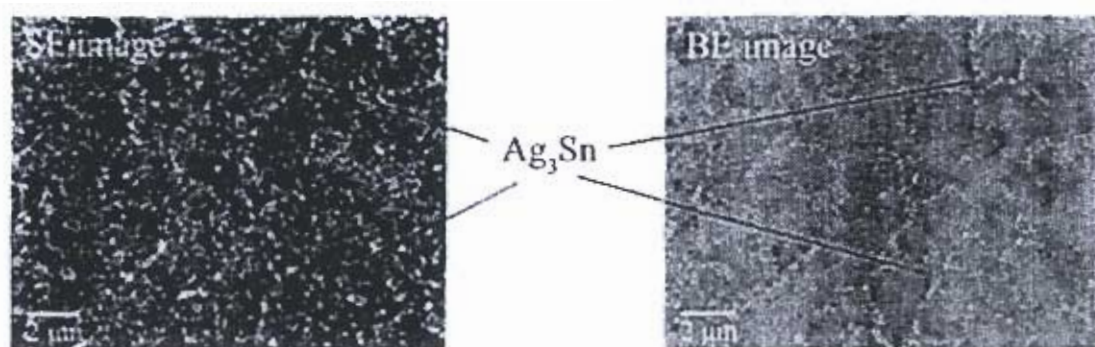


FIGURE 8

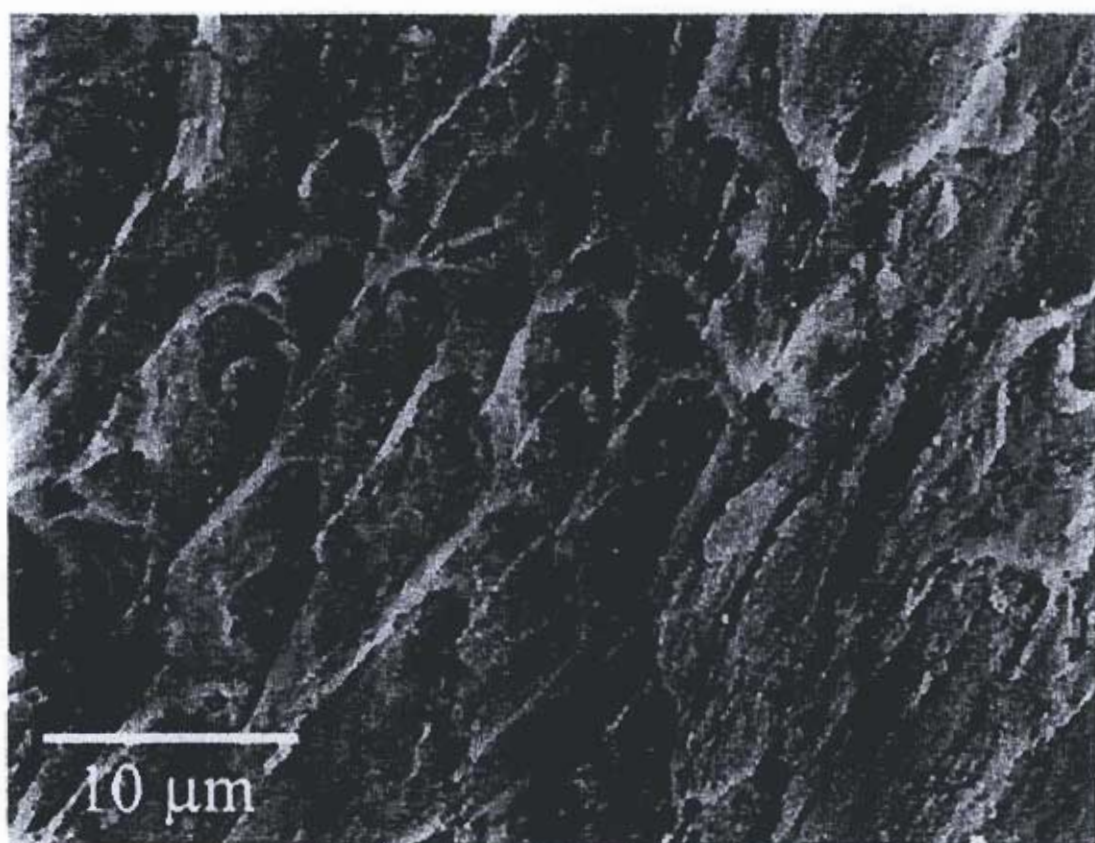


FIGURE 9

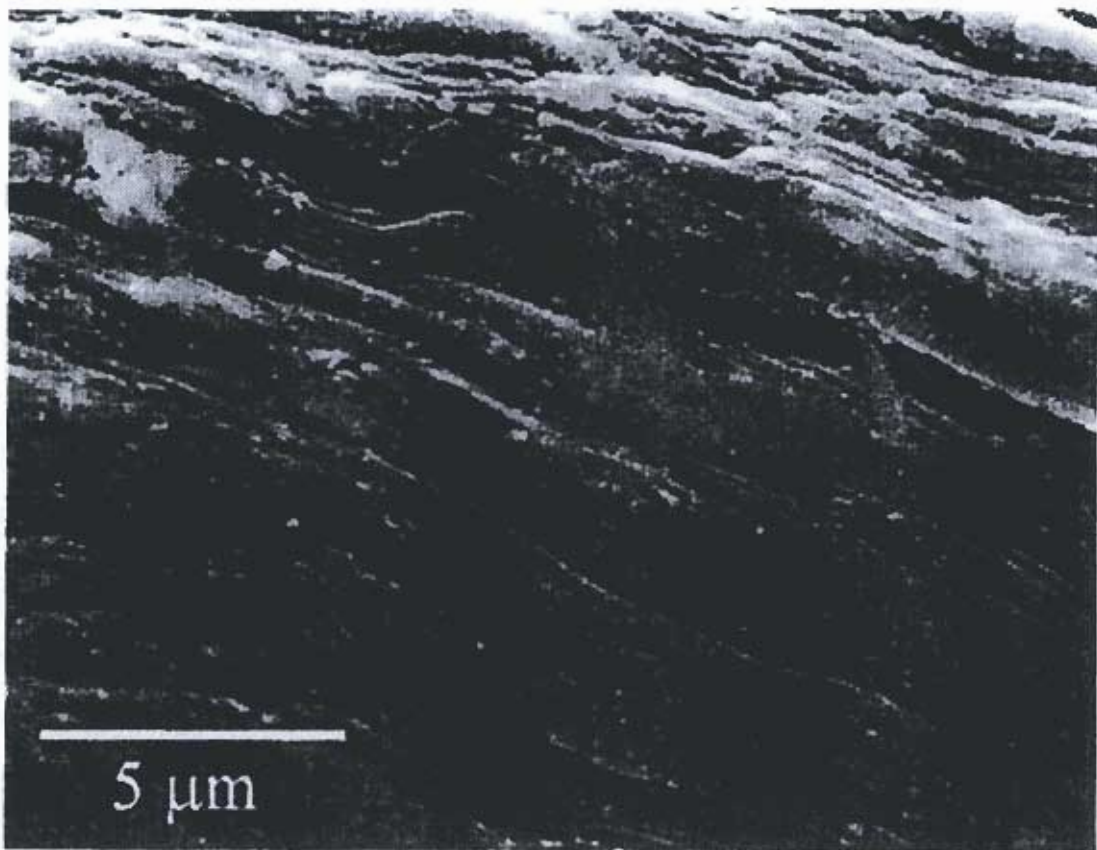


FIGURE 10

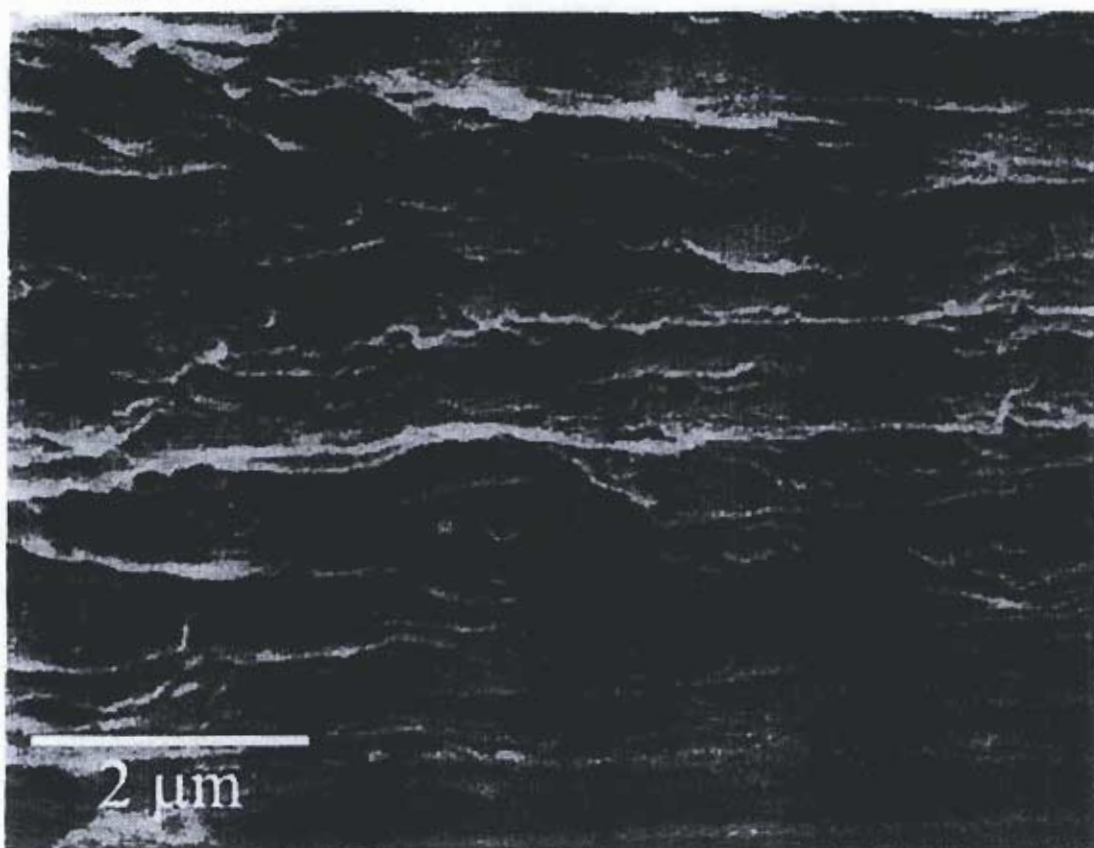


FIGURE 11

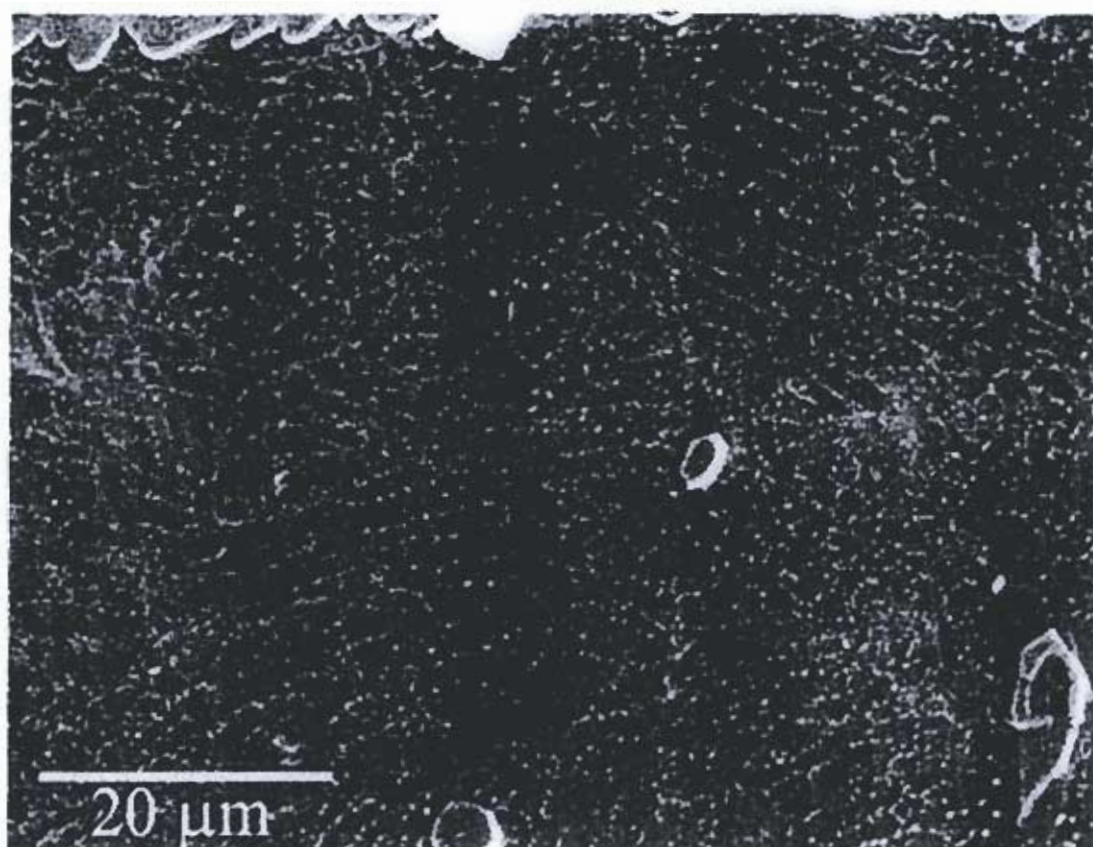


FIGURE 12

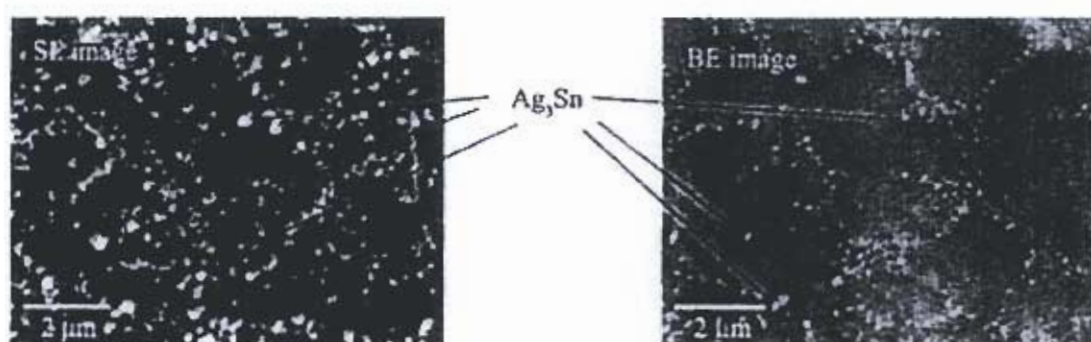


FIGURE 13

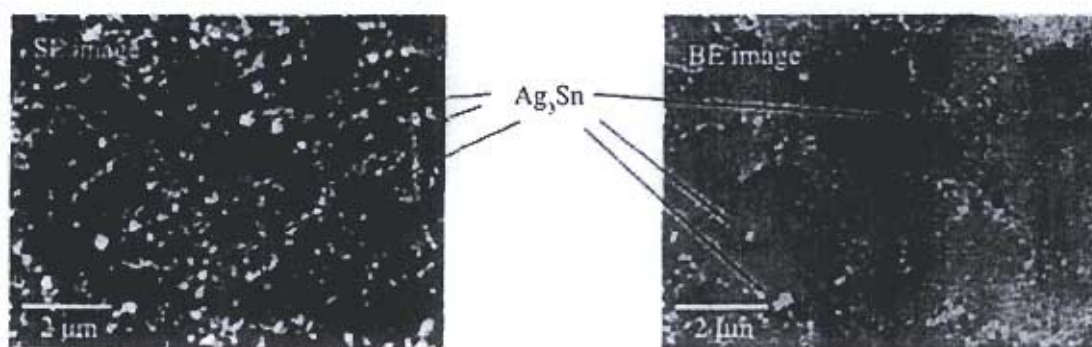


FIGURE 14

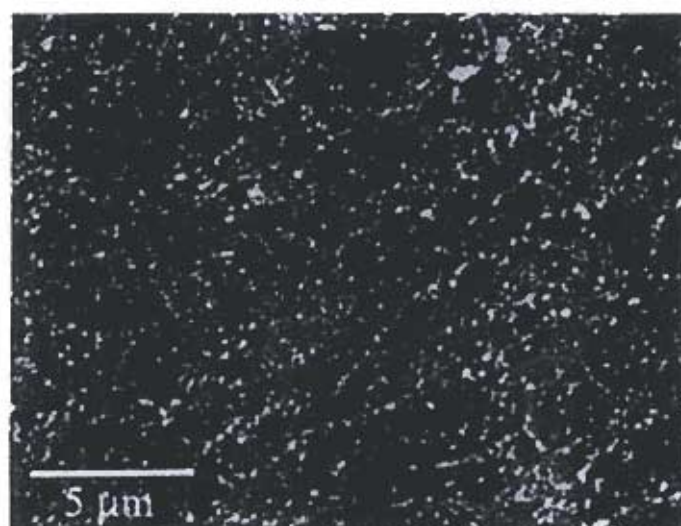


FIGURE 15

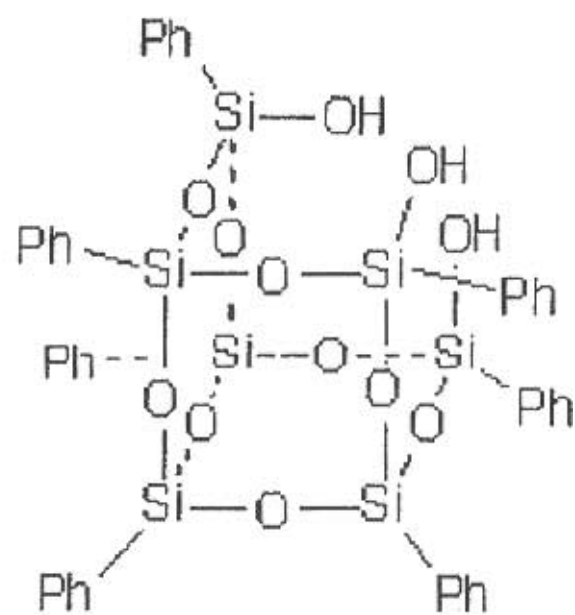


FIGURE 16

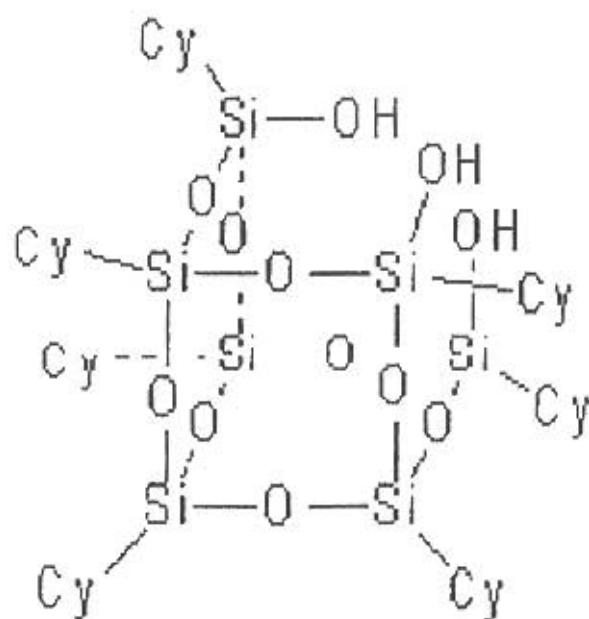


FIGURE 17

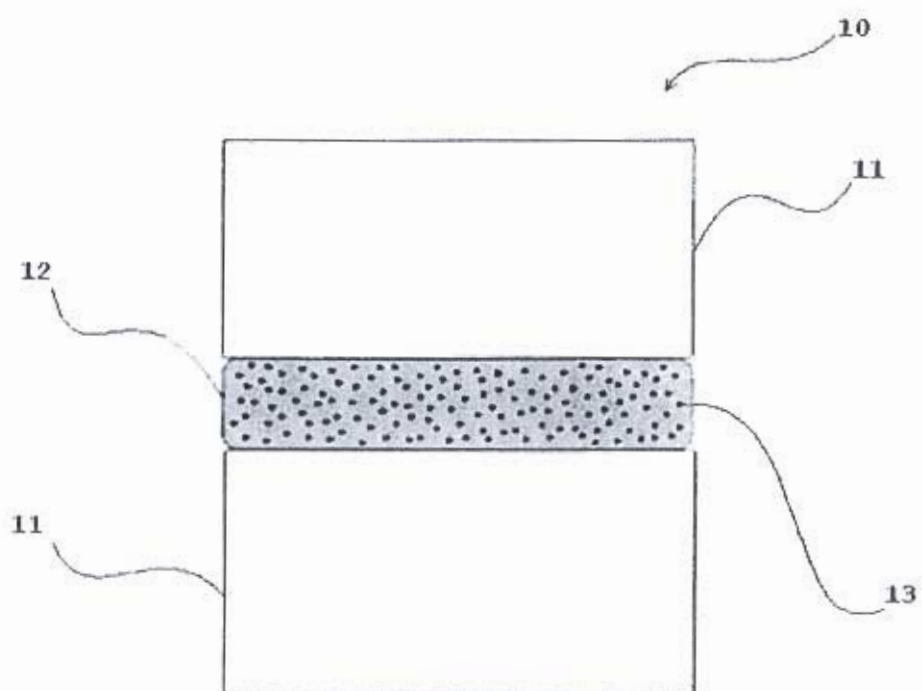


FIGURE 18

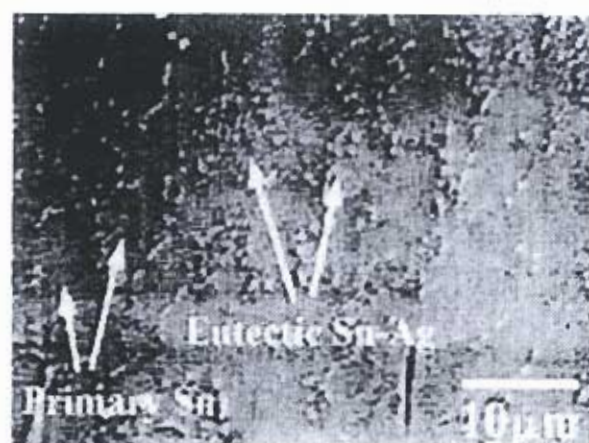


FIGURE 19

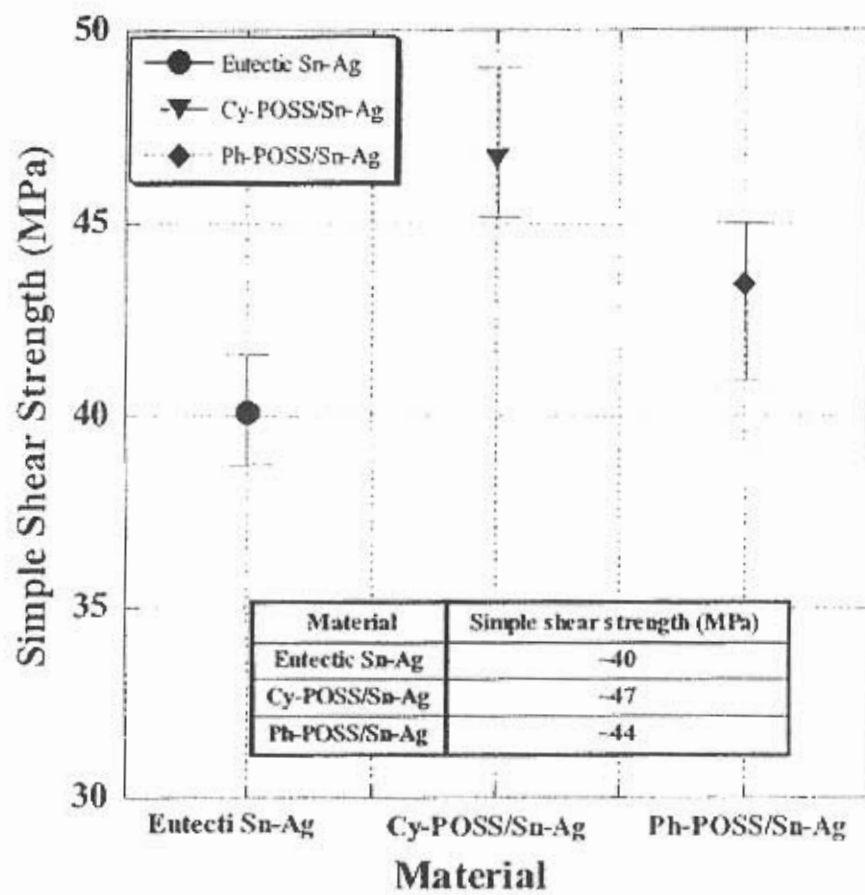


FIGURE 20

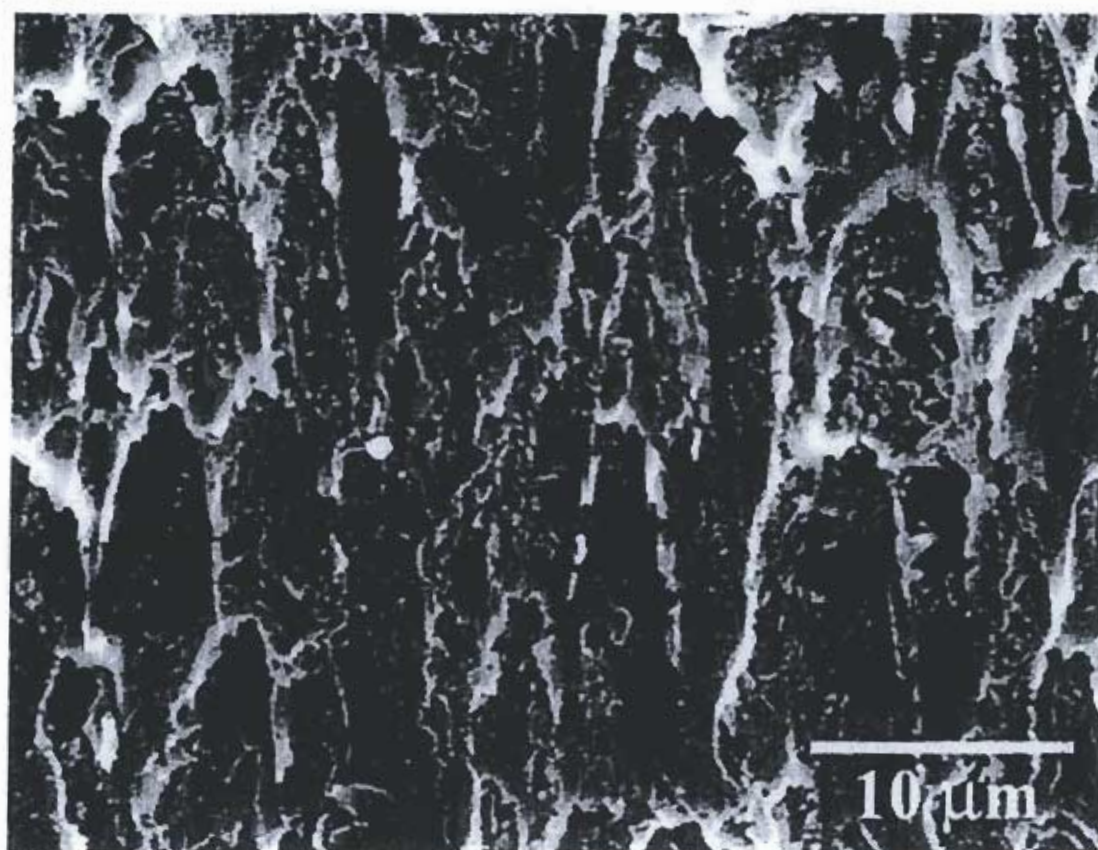


FIGURE 21

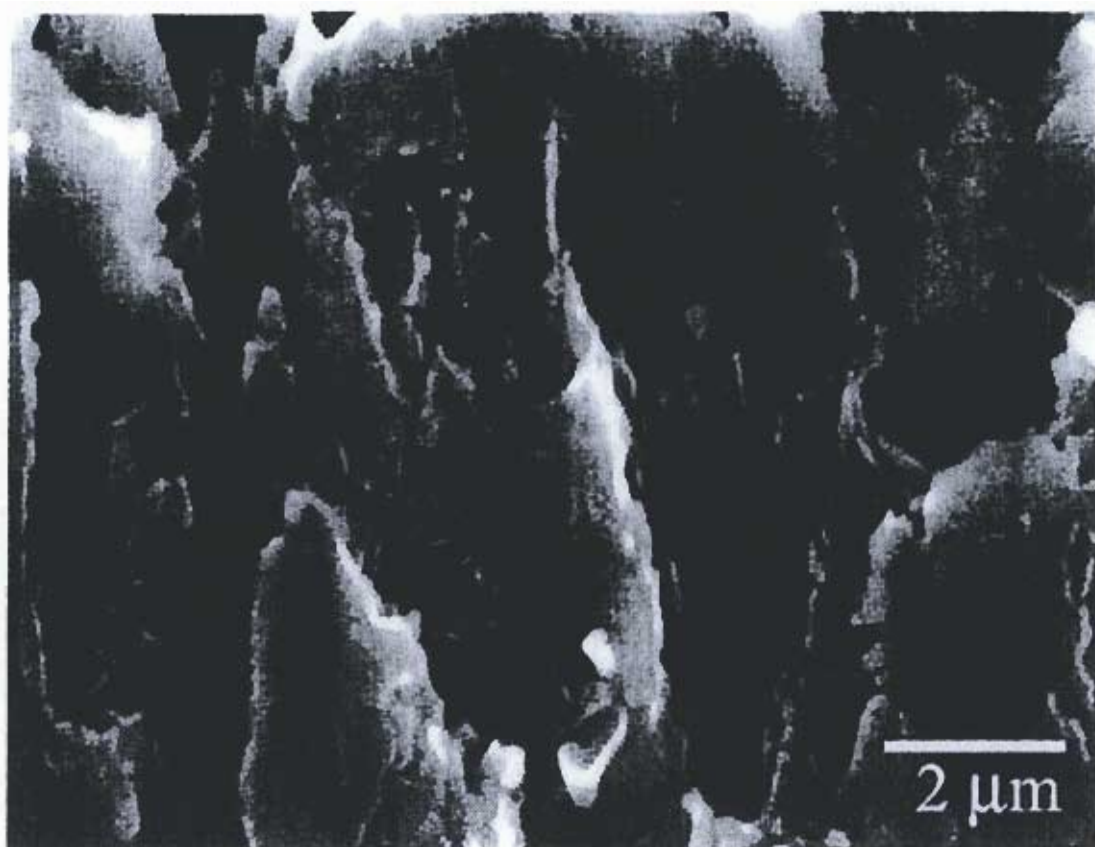


FIGURE 22

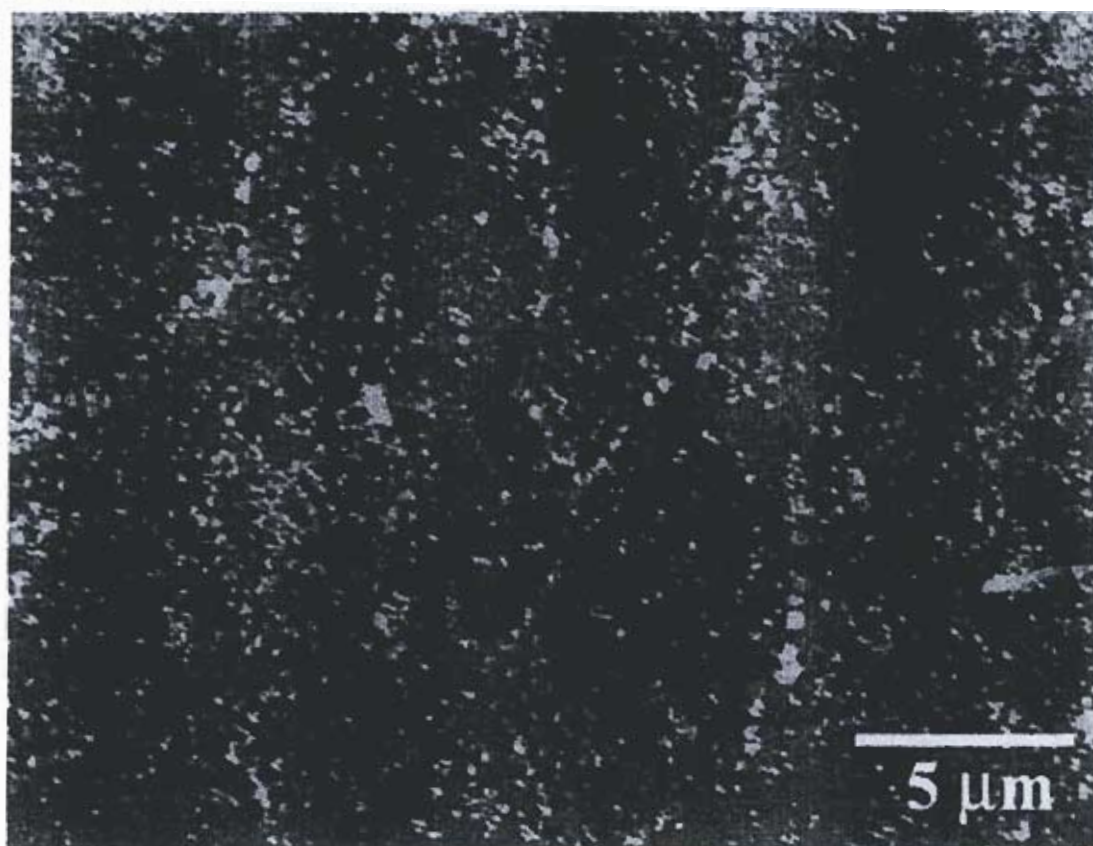


FIGURE 23

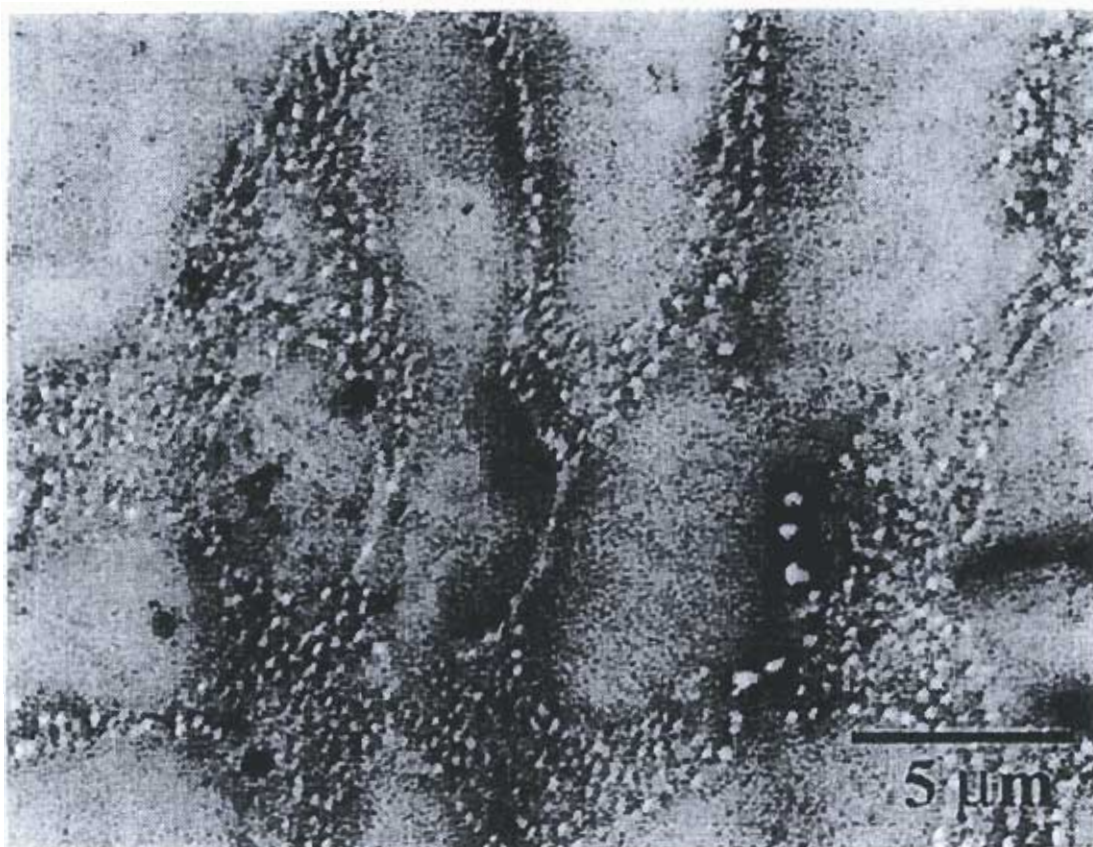


FIGURE 24

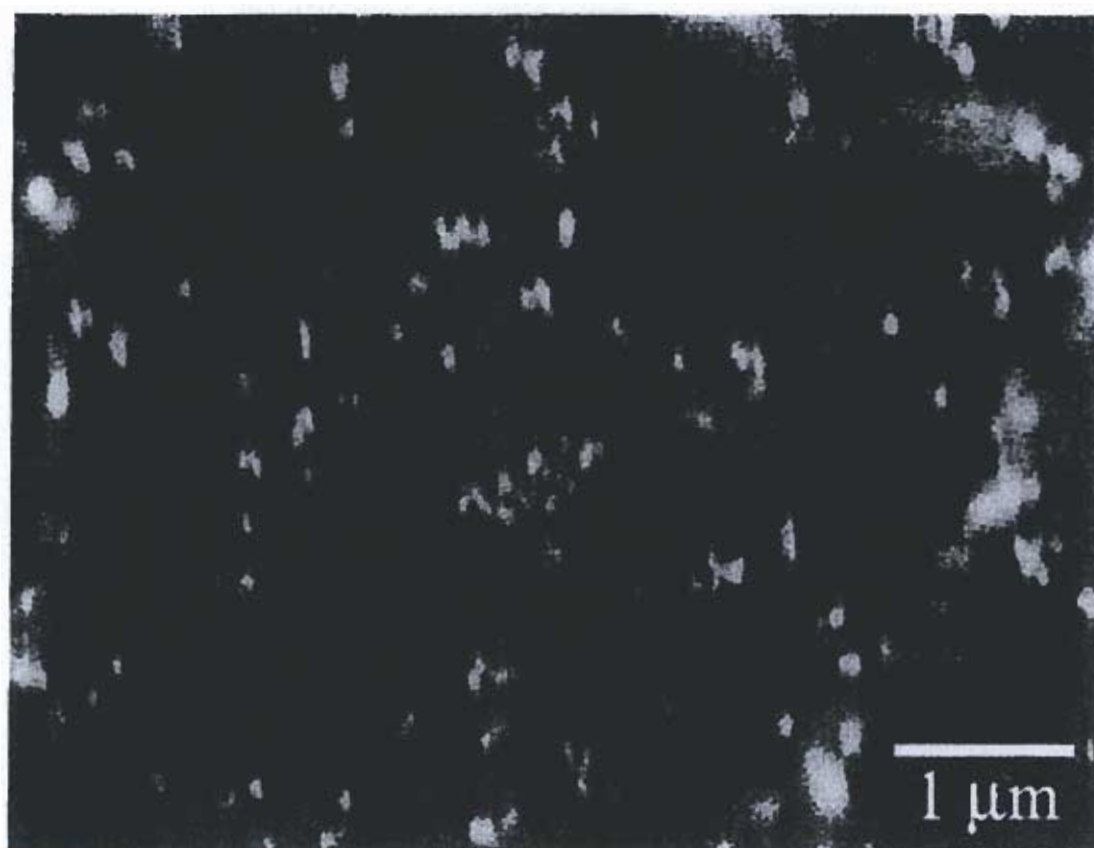


FIGURE 25

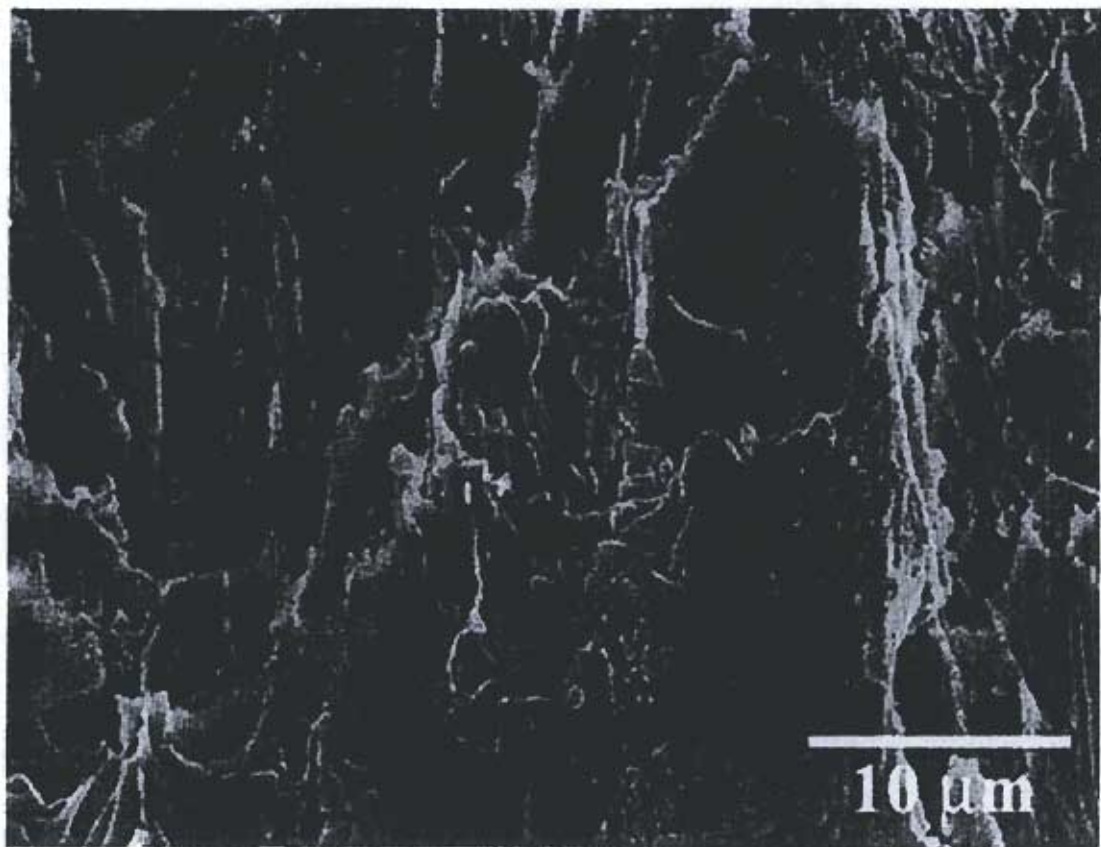


FIGURE 26



FIGURE 27



FIGURE 28

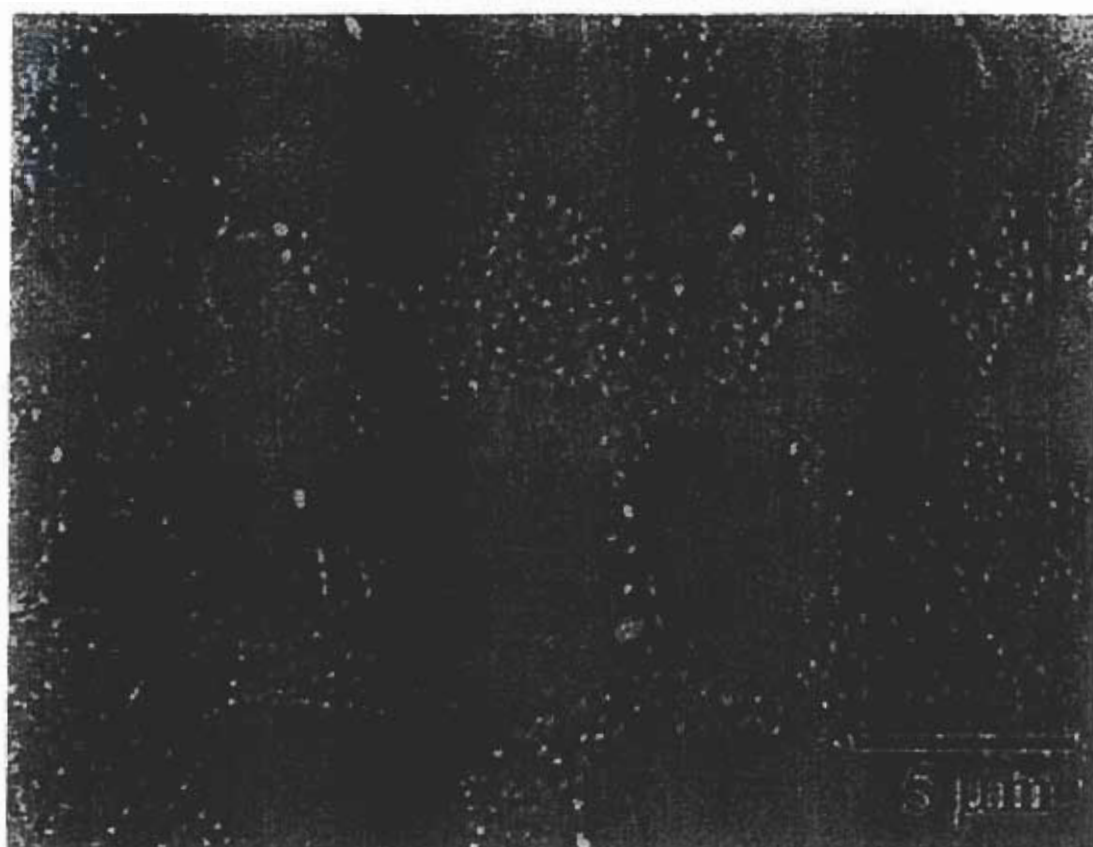


FIGURE 29

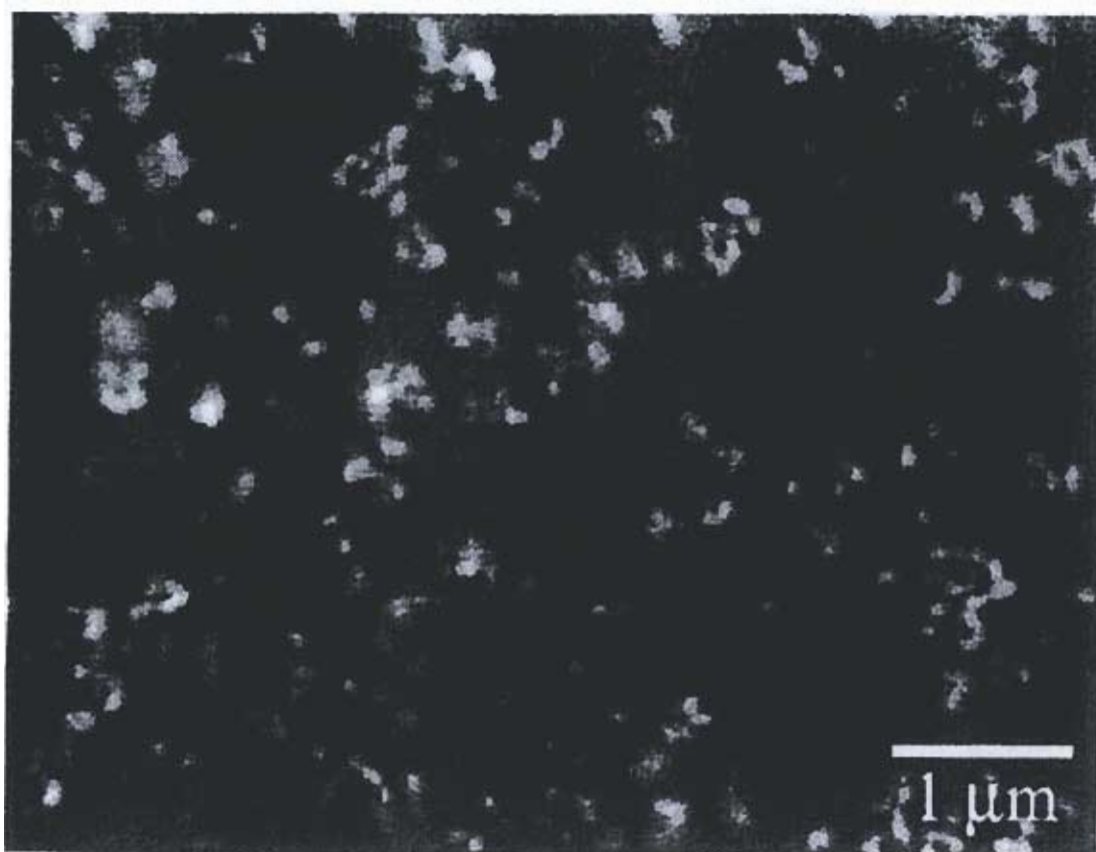


FIGURE 30

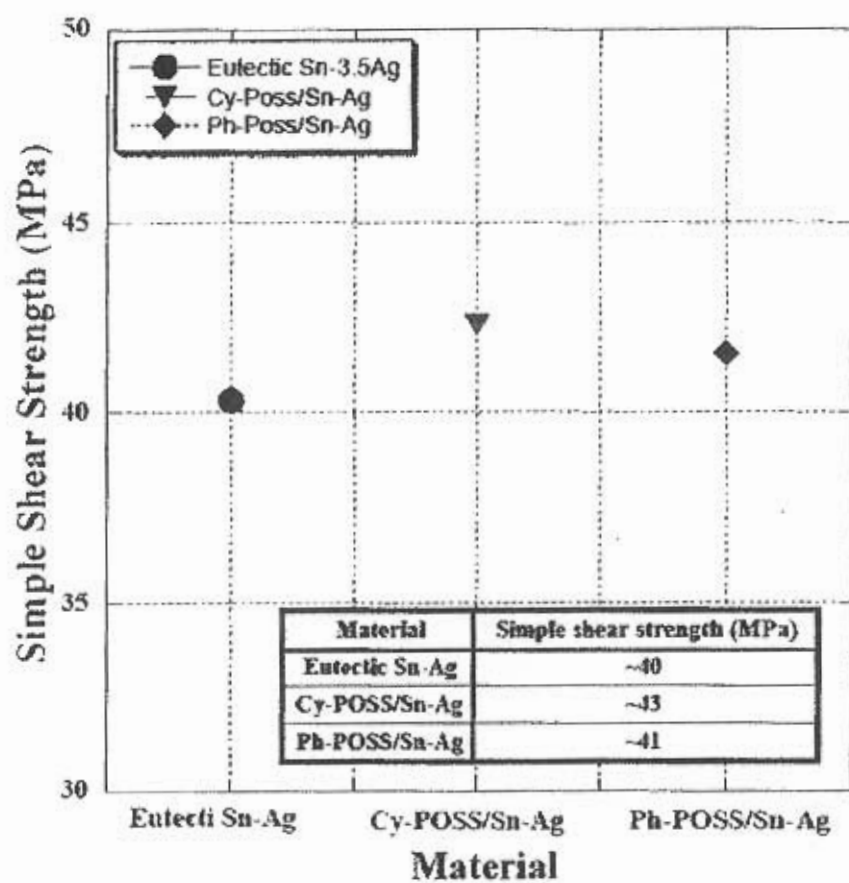


FIGURE 31

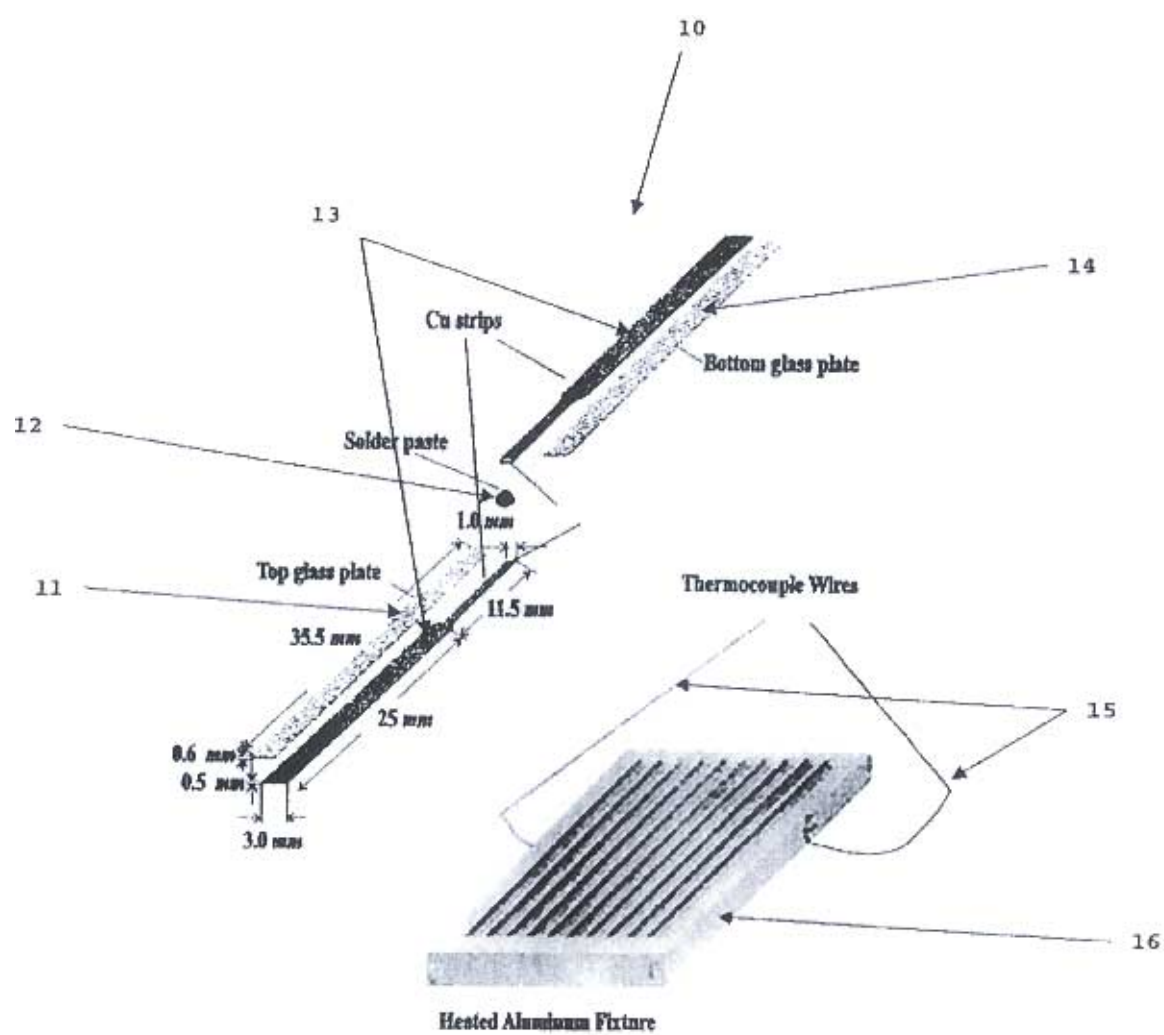


Figure 32

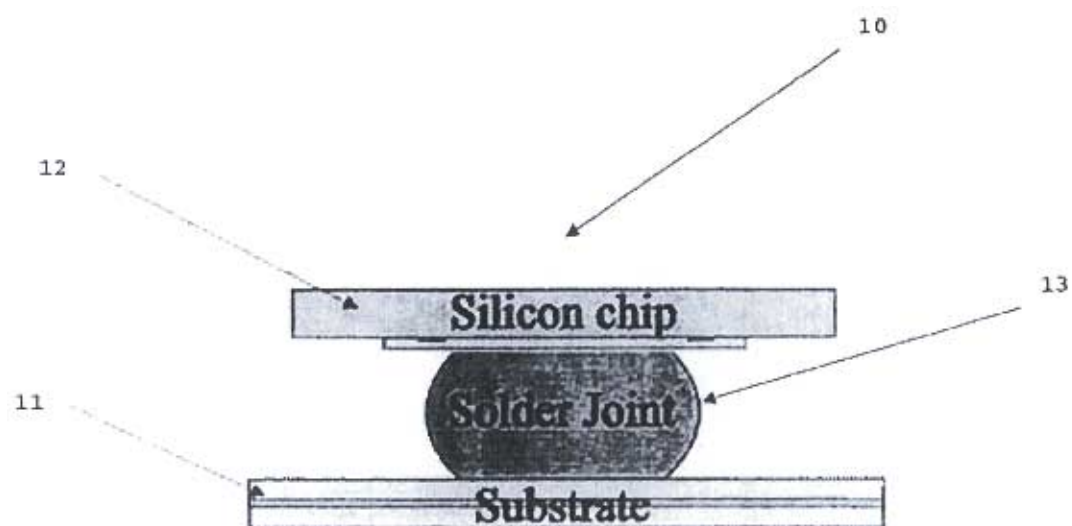


Figure 33

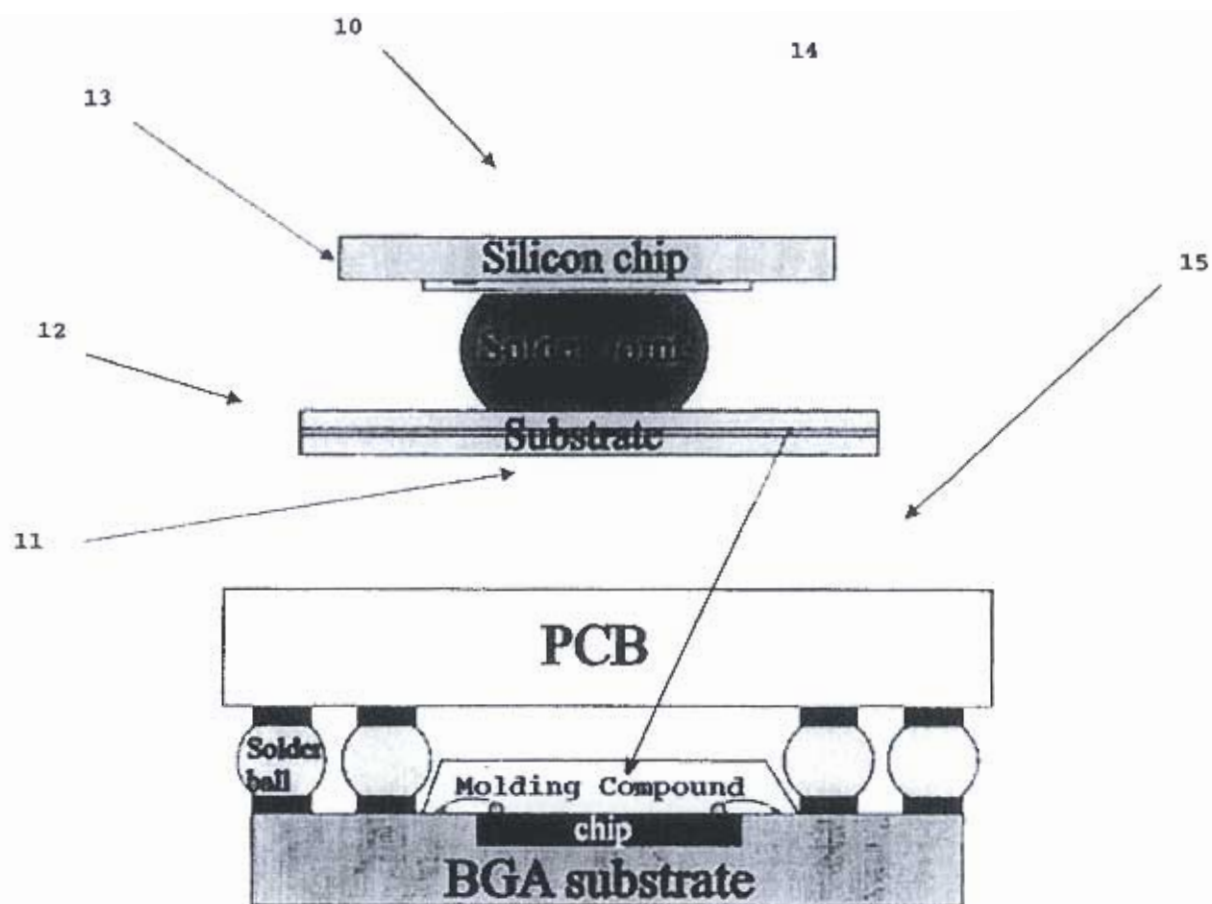


Figure 34



Fig. 35A (Cyclohexenyl-triol) Fig. 35B

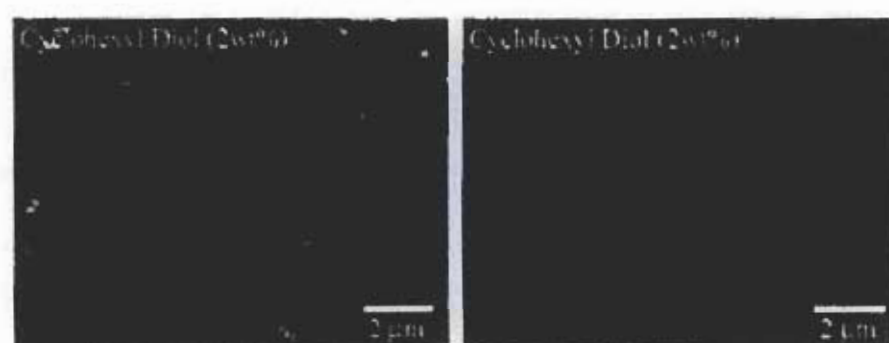


Fig. 35C (Cyclohexyl Diol) Fig. 35D

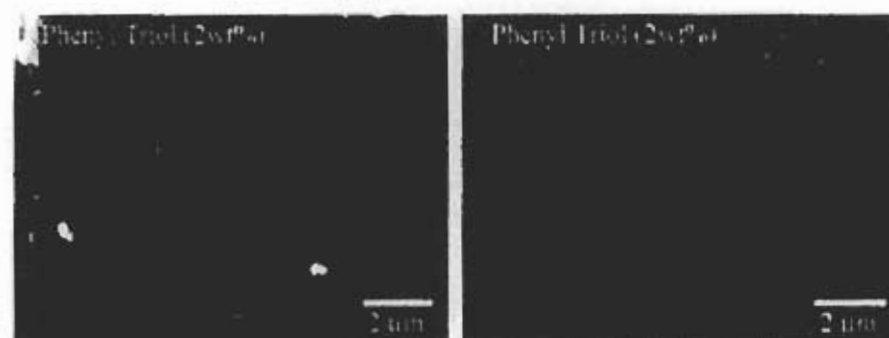


Fig. 35 E (Phenyl-Triol) Fig. 35F

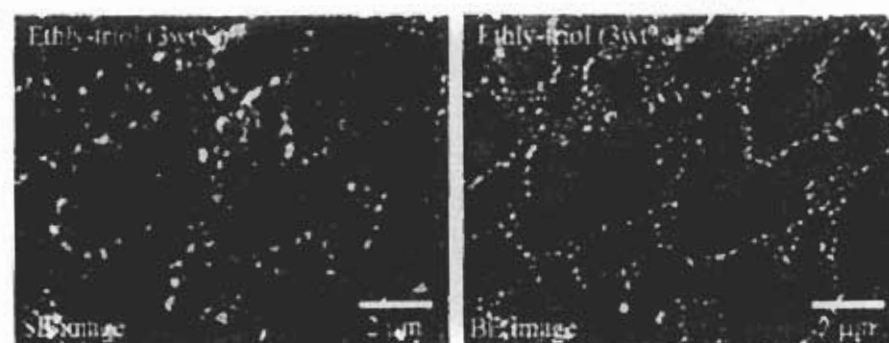


Fig. 35G (Ethyl-Triol) Fig. 35H

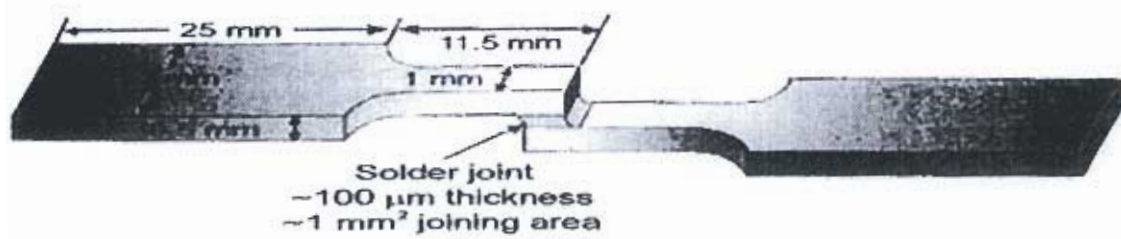


Fig. 36

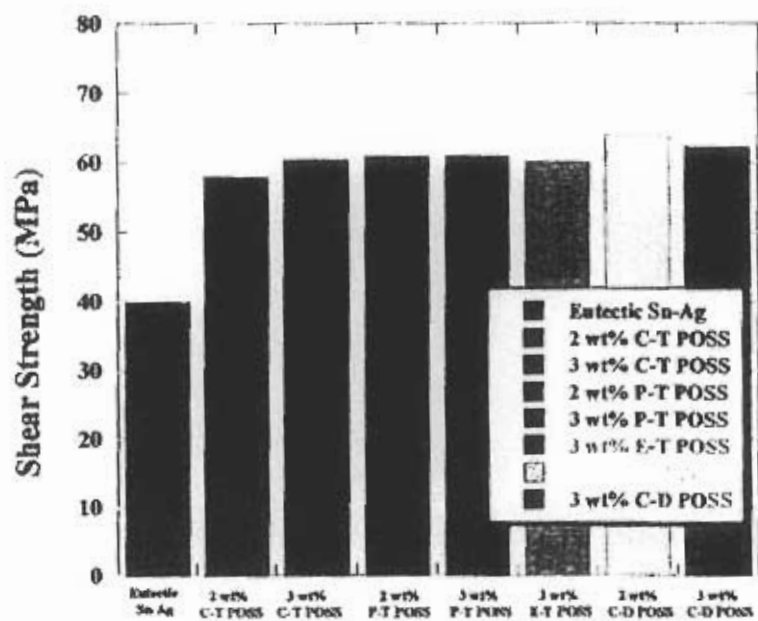


Fig. 37

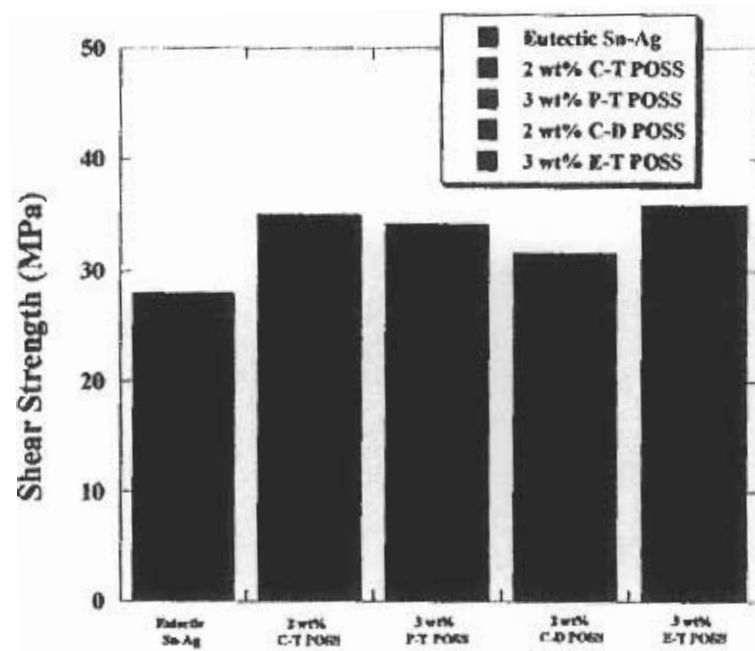


Fig. 38

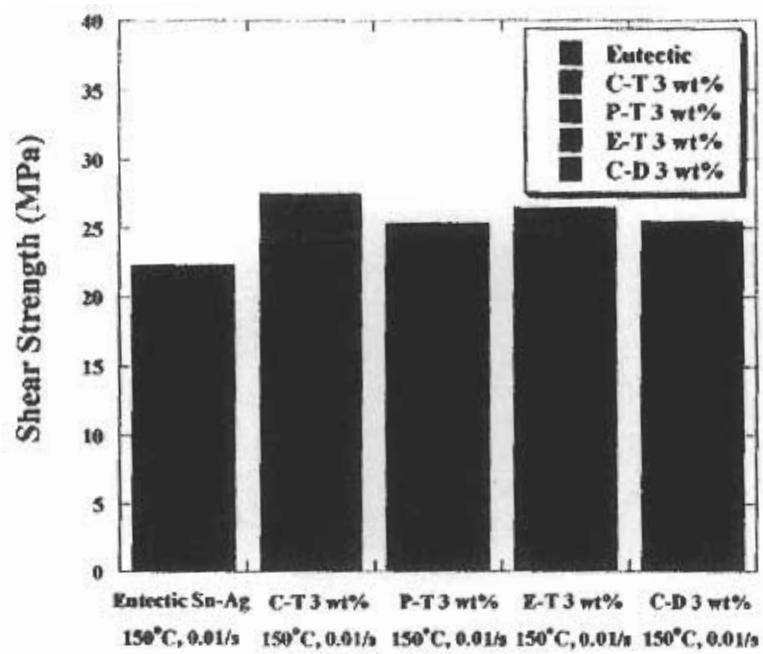


Fig. 39

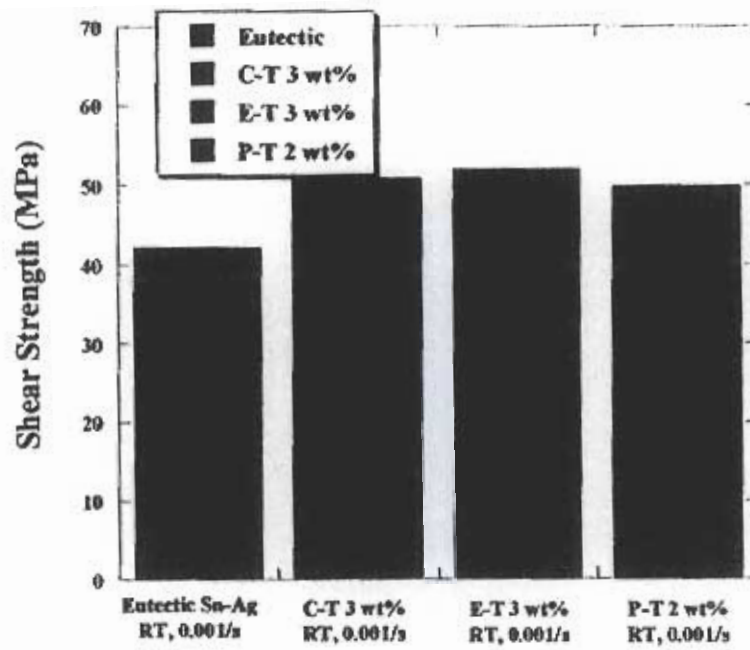


Fig. 40



Fig 41A eutectic Sn-Ag



Fig. 41B POSS containing composite solder



Fig. 42A

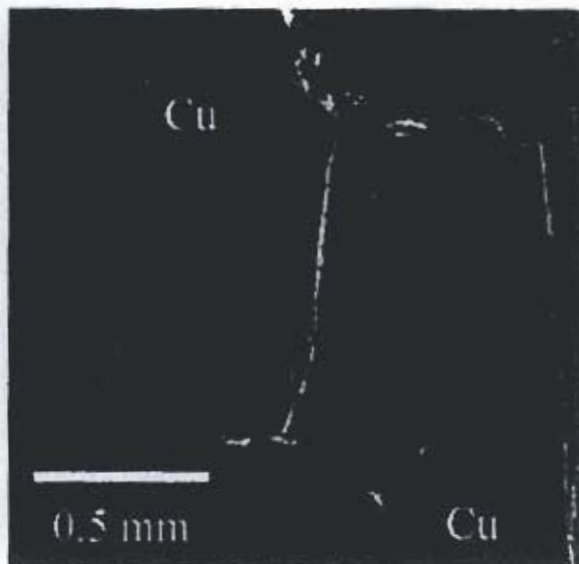


Fig. 42B

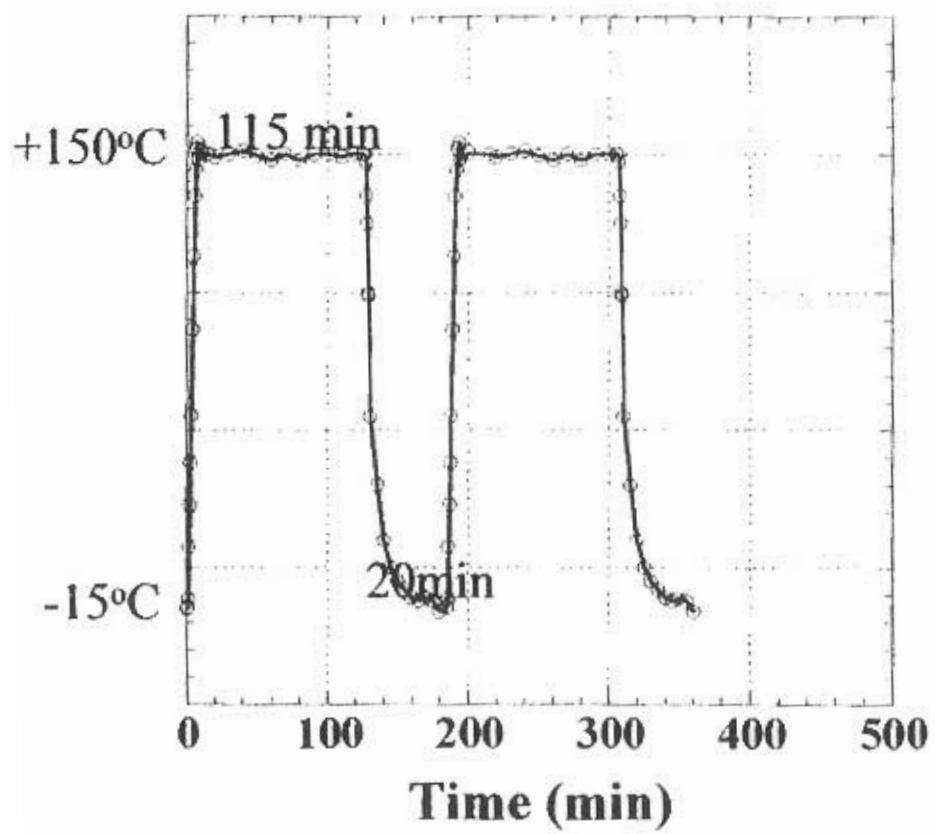


Fig. 43



Fig. 44A 0 cycle



Fig. 44B 250 cycles



Fig. 44C 500 cycle

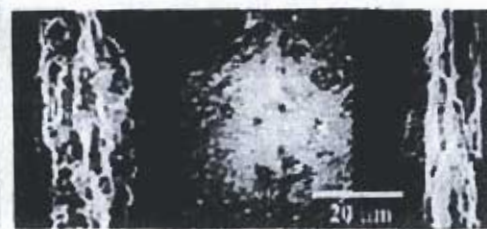


Fig. 44D 1000 cycles



Fig. 45A 0 cycle



Fig. 45B 250 cycles



Fig. 45C 500 cycle



Fig 45D 1000 cycles



Fig. 46A 0 cycle



Fig. 46B 250 cycles



Fig. 46C 500 cycle



Fig. 46D 1000 cycles

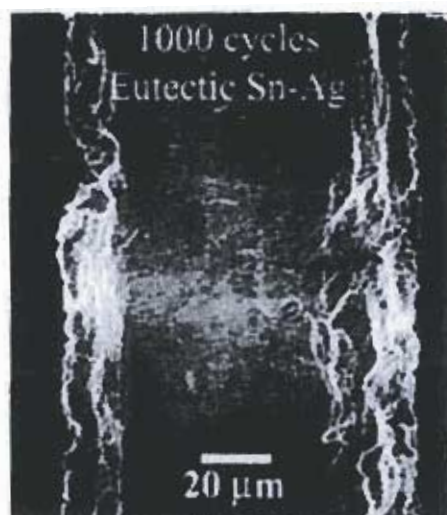


Fig. 47A eutectic Sn-Ag



Fig. 47B 2 wt% POSS



Fig. 47C 3 wt% POSS

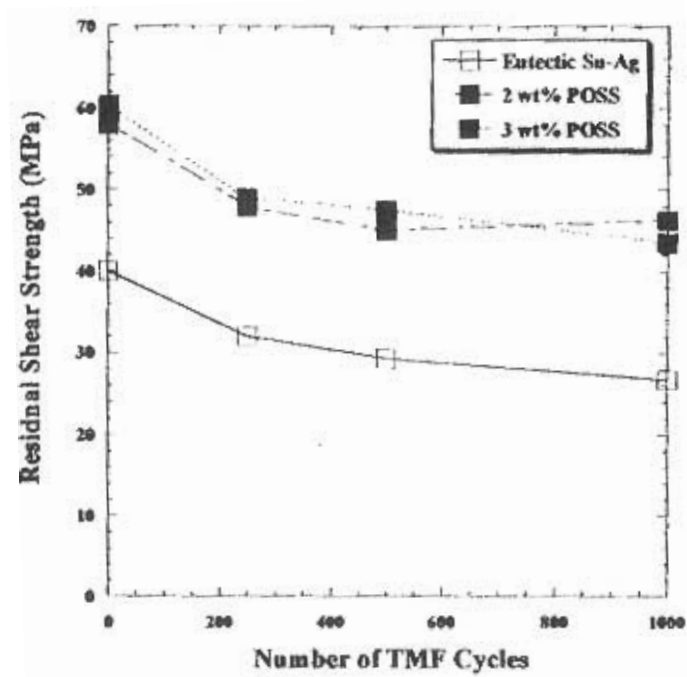


Fig. 48

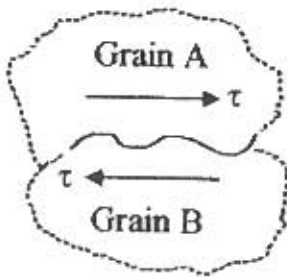


Fig. 49A

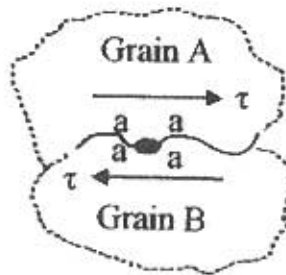


Fig. 49B

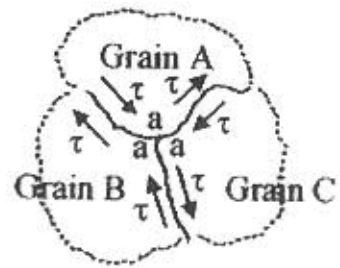


Fig 49C

● Intermetallic Particle

τ Shear Stress

a Area of Lattice Deformation

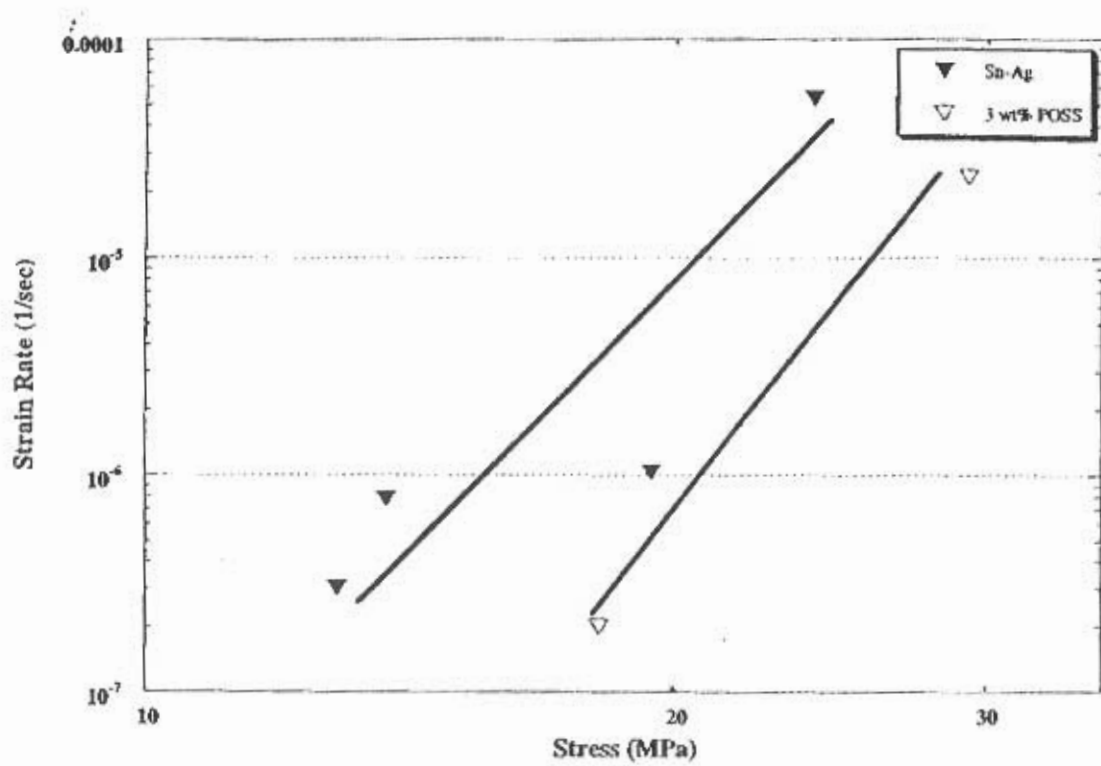


FIGURE 50