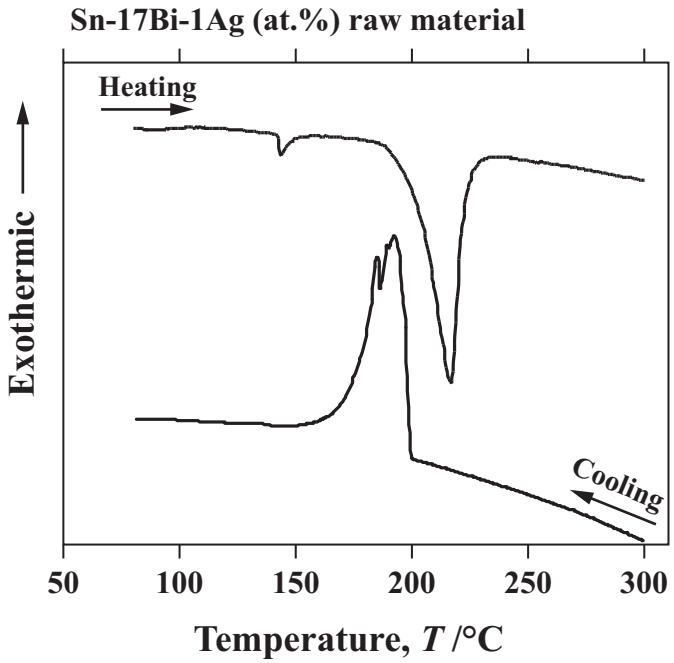

Figure 1 Result of DSC measurement of Sn-17Bi-1Ag (at.%) alloy.

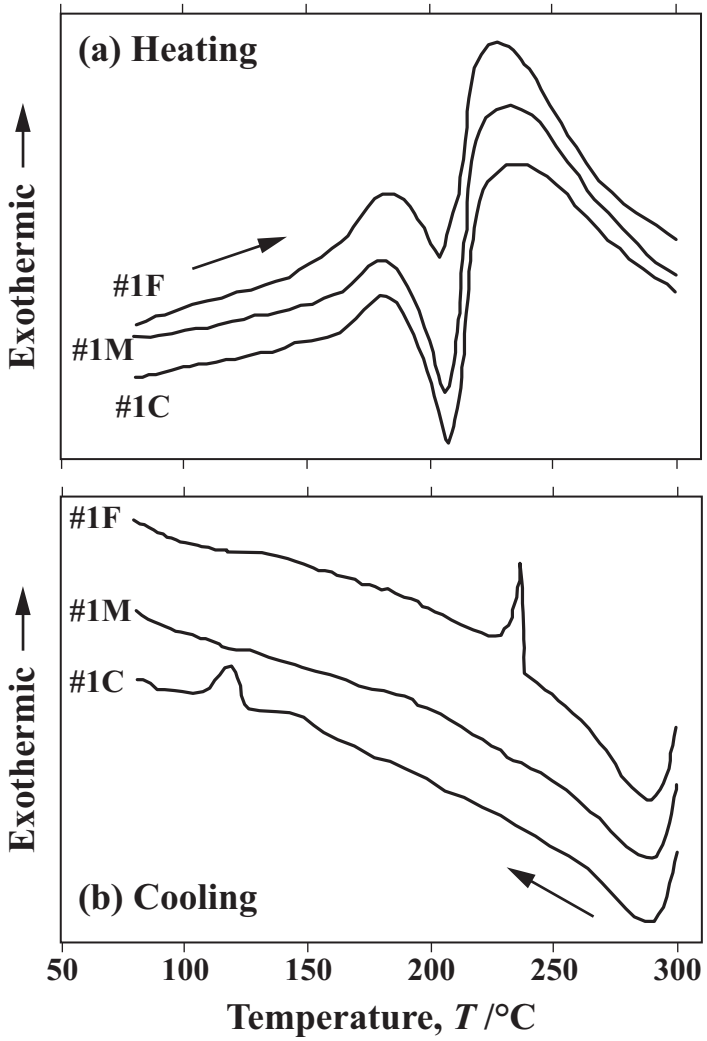

Figure 2 Result of DSC measurement of blended samples of Sn-17Bi-1Ag (at.%) and Ag powders. #1 represents the blend ratio shown in Table 2. F, M and C represent the size of Ag particles, fine, medium and coarse, respectively, shown in Table 1.

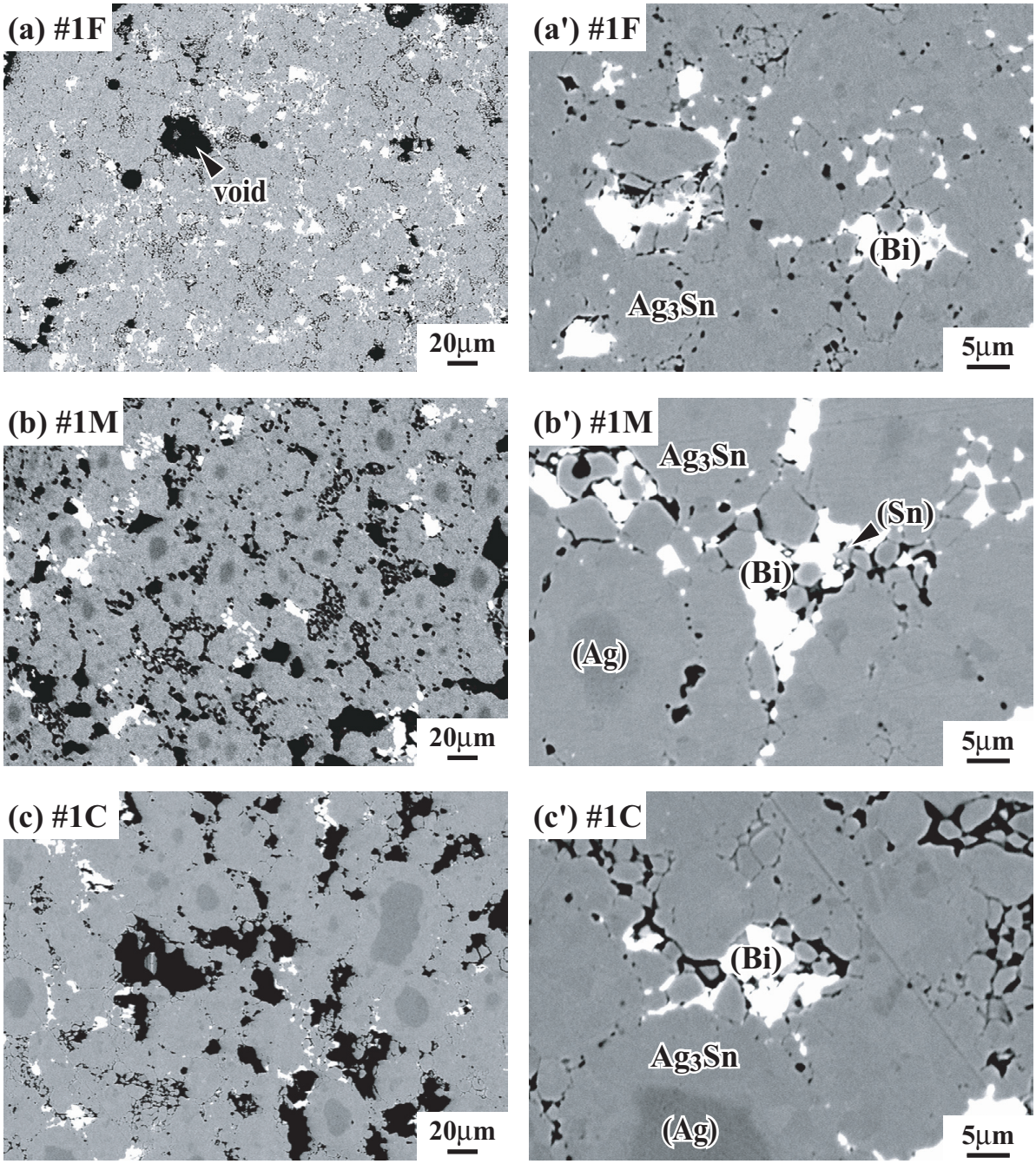

Figure 3 BSE images of microstructure of #1F, #1M and #1C samples after the TLPS process under the condition of T_{max} = 300°C and t_h = 10 min.

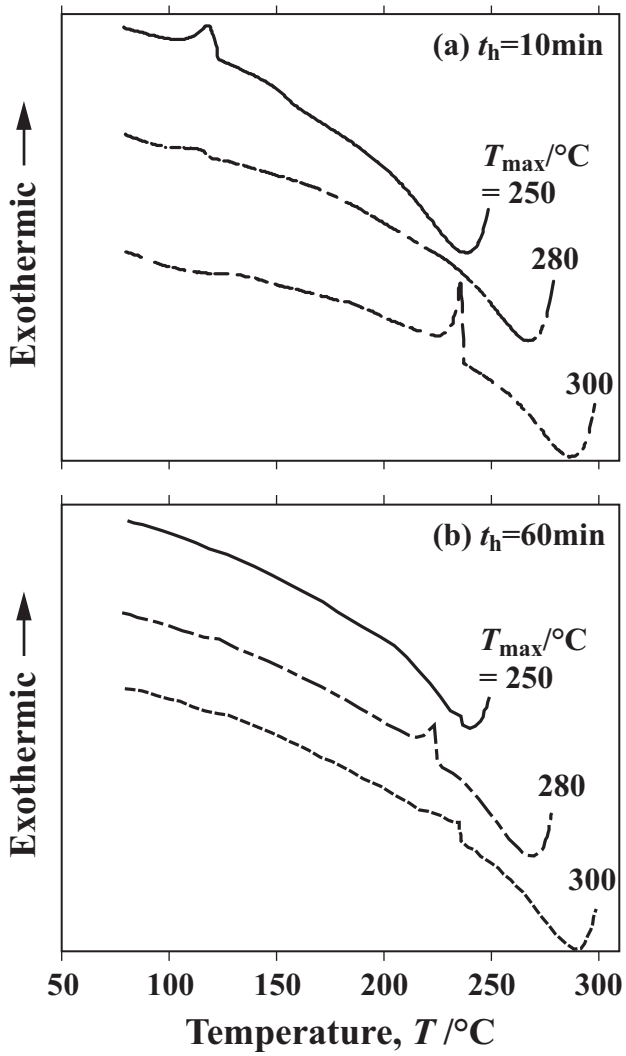

Figure 4 Result of DSC measurement of blended #1 samples. Conditions of the TLPS process were (a) T_{max} = 250, 280 and 300°C and t_h = 10min. and (b) T_{max} = 250, 280 and 300°C and t_h = 60min.

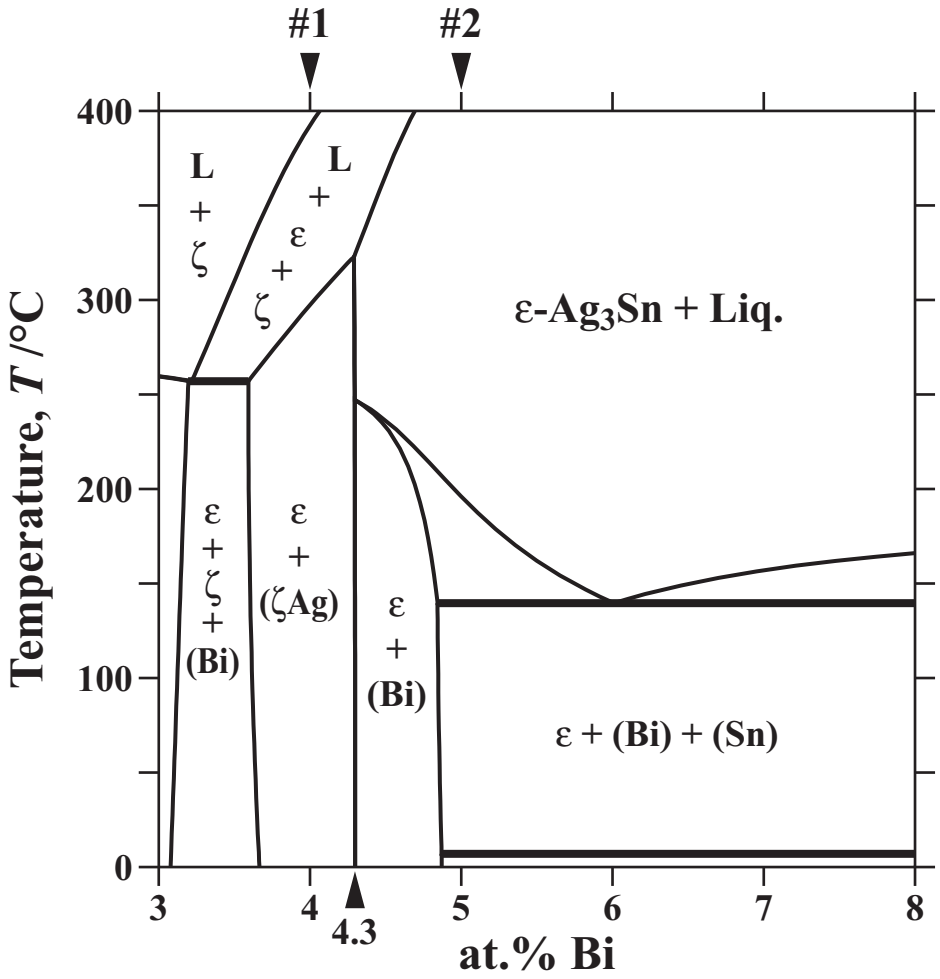

Figure 5 Phase diagram calculated along pure Ag to Sn-17Bi-1Ag (at.%) in the substantial Bi composition between 3 and 8 at.%.

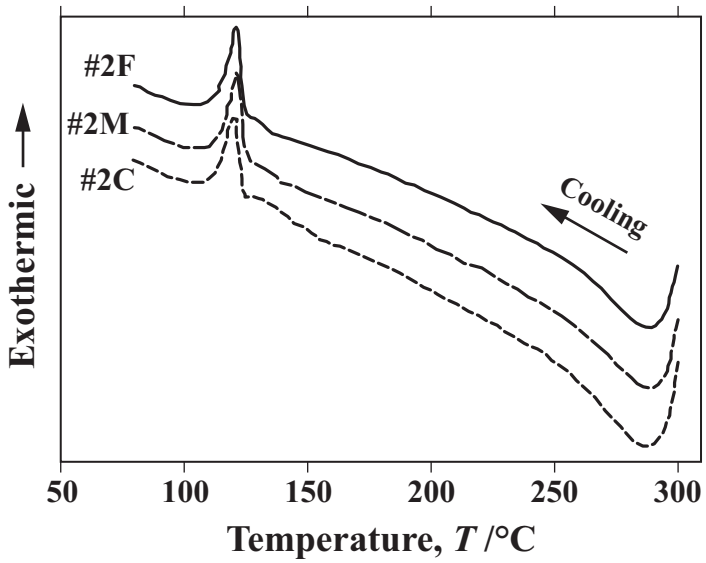

Figure 6 Result of DSC measurement of blended #2 samples after the TLPS process under the condition of T_{max} = 300°C and t_h = 10min.

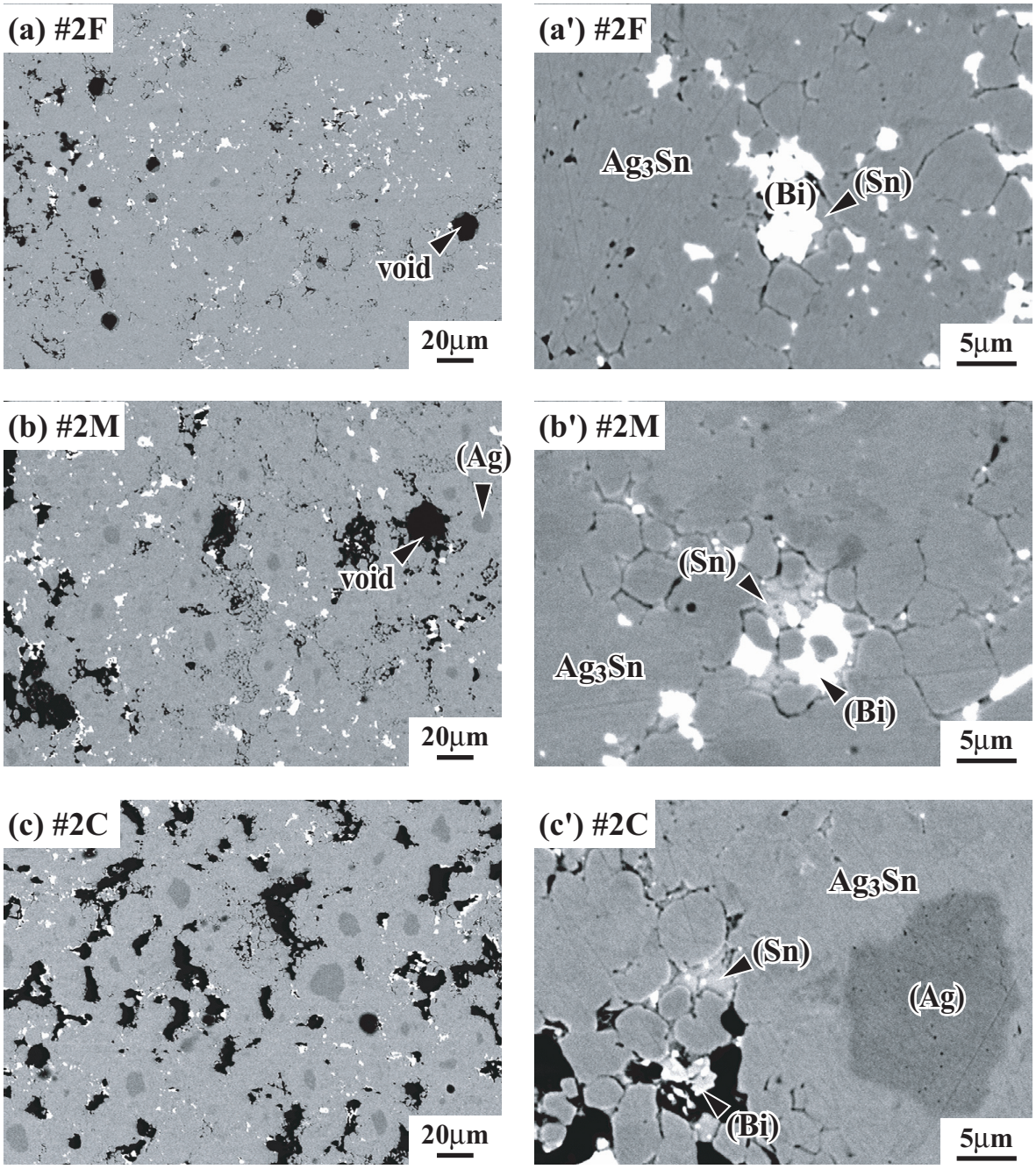

Figure 7 BSE images of microstructure of #2F, #2M and #2C samples after the TLPS process under the condition of T_{max} = 300°C and t_h = 10 min.