

Figure(s)

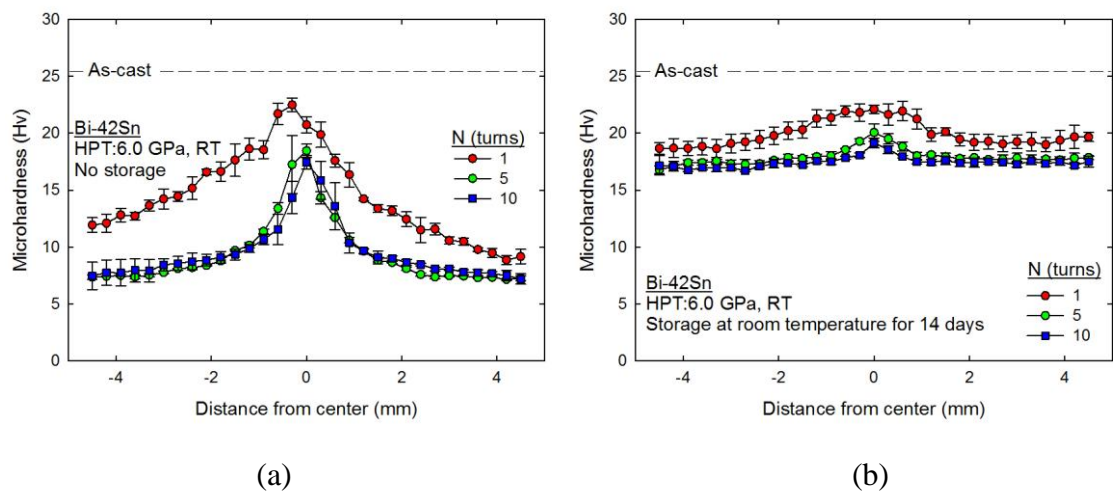


Figure 1 Variation of Vickers microhardness with distance from the centers of the disks before and after HPT processing: (a) within 2 hours after HPT processing and (b) after HPT processing and storage for 14 days at room temperature.

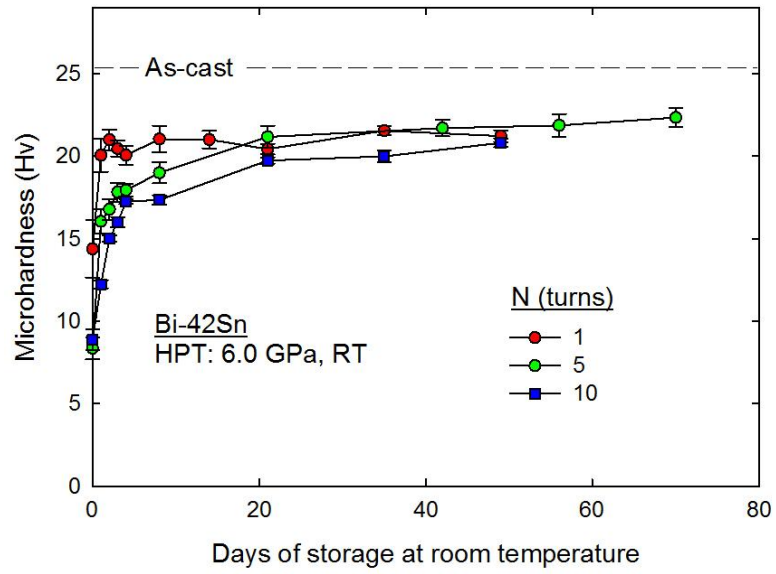


Figure 2 Vickers microhardness measured 2 mm from the disk centers versus numbers of days of storage at RT for the as-cast alloy and after HPT processing through 1, 5 and 10 turns.

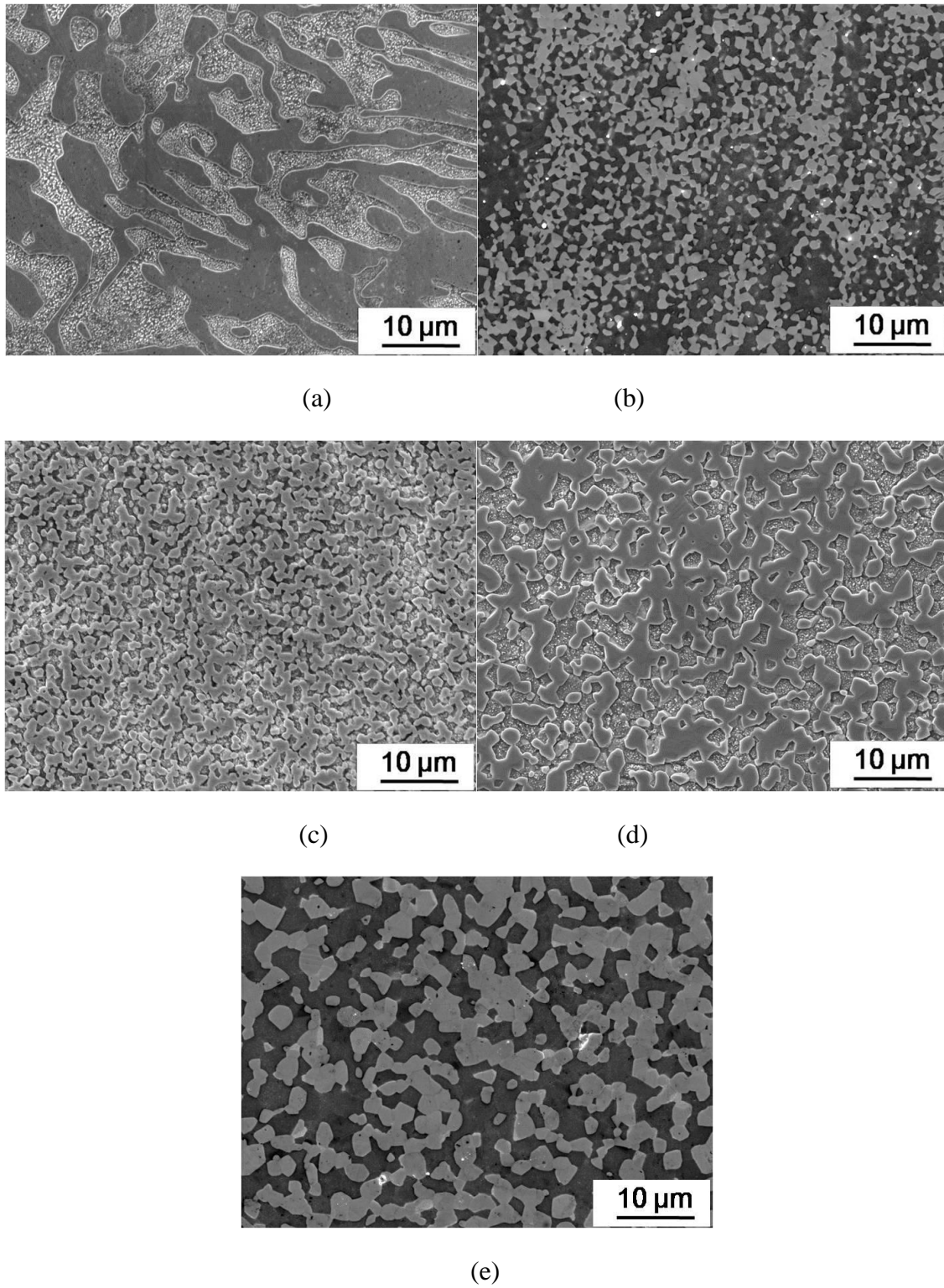
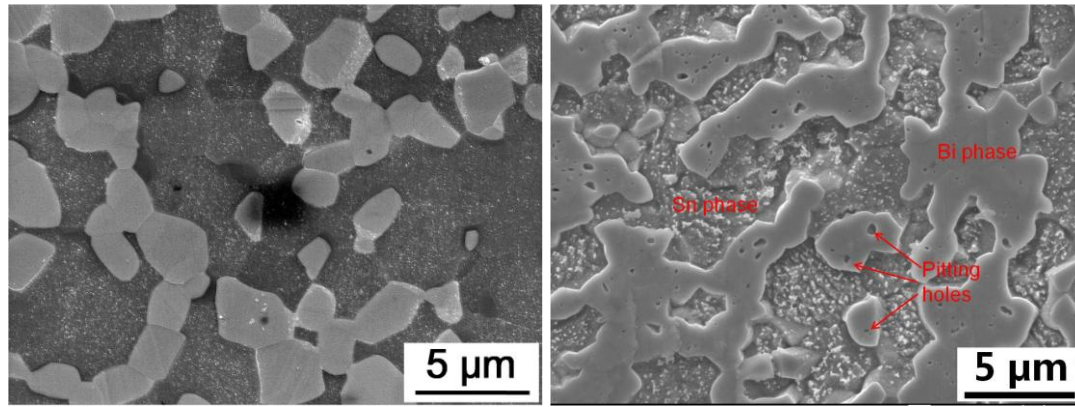


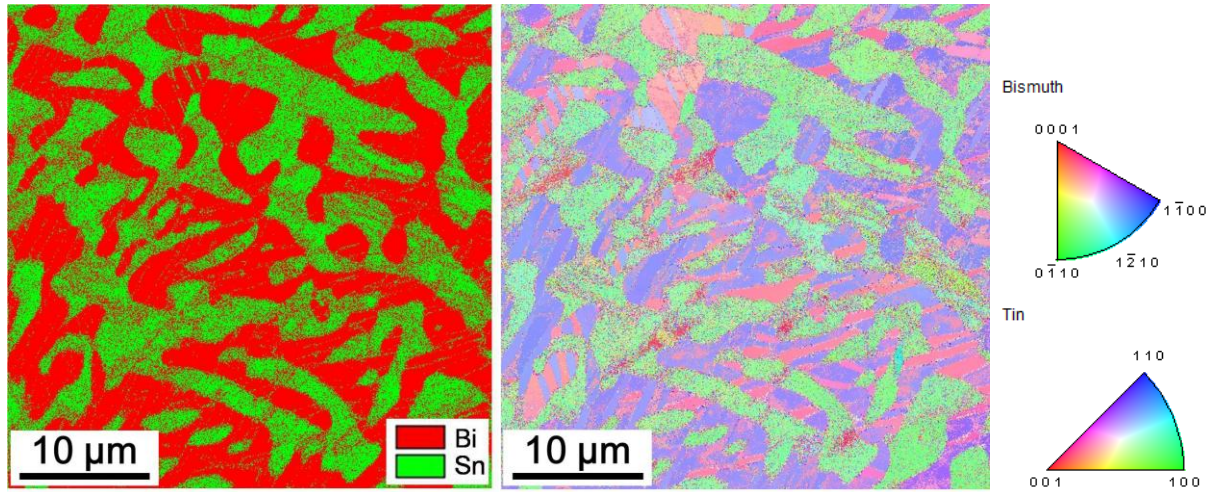
Figure 3 Microstructures of Bi-Sn samples (a) in the as-cast condition and after HPT processing for 10 turns and storage at RT for (b) 1 day, (c) 7 days, (d) 35 days and (e) 91 days.



(a)

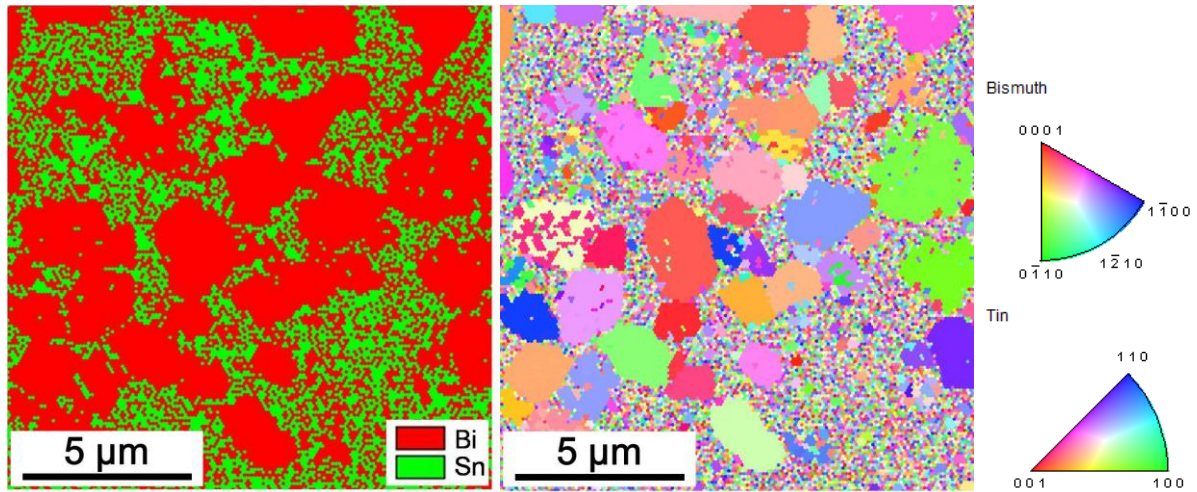
(b)

Figure 4 Microstructure of Bi-Sn sample after HPT processing for 10 turns and storage at RT for 91 days (a) without etching and (b) after etching.



(a)

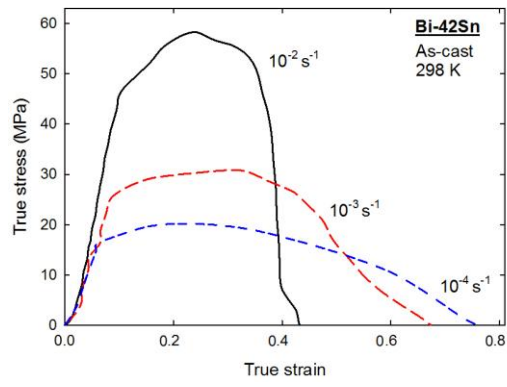
(b)



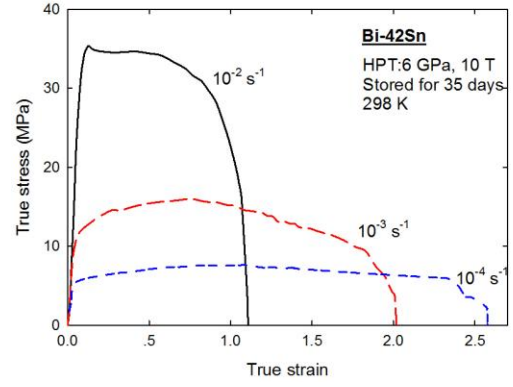
(c)

(d)

Figure 5 Microstructures of Bi-Sn samples by EBSD: (a) phase map and (b) orientation map of as-cast sample; (c) phase map and (d) orientation map after HPT processing and storage at RT for 35 days.



(a)



(b)

Figure 6 True stress-true strain curves at different strain rates at RT for (a) as-cast condition and (b) after HPT processing for 10 turns and storage for 35 days.

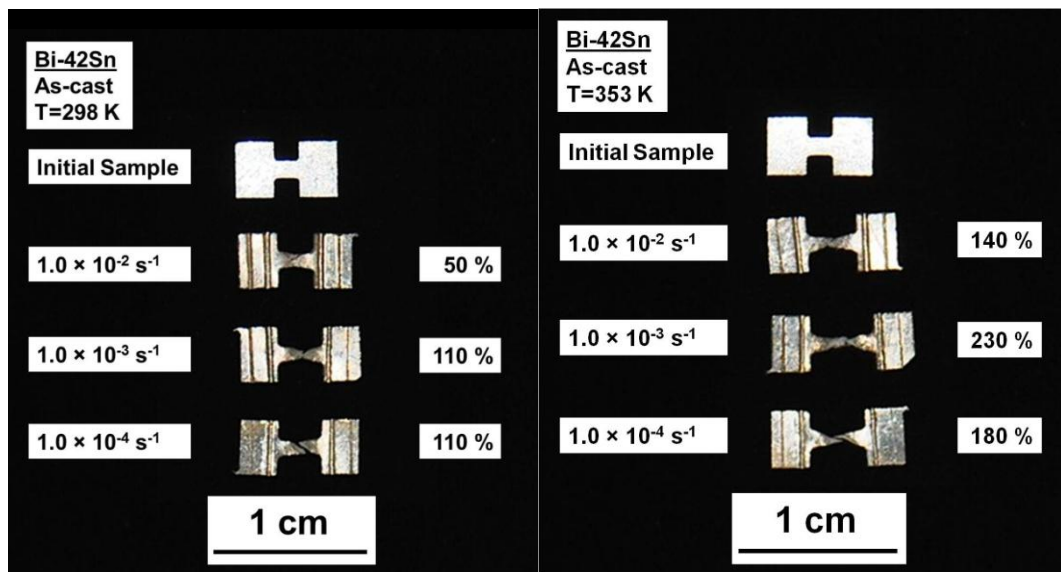


Figure 7 Appearance of specimens of as-cast alloy after testing to failure at different initial strain rates for tests conducted at (a) 298 K and (b) 353 K.

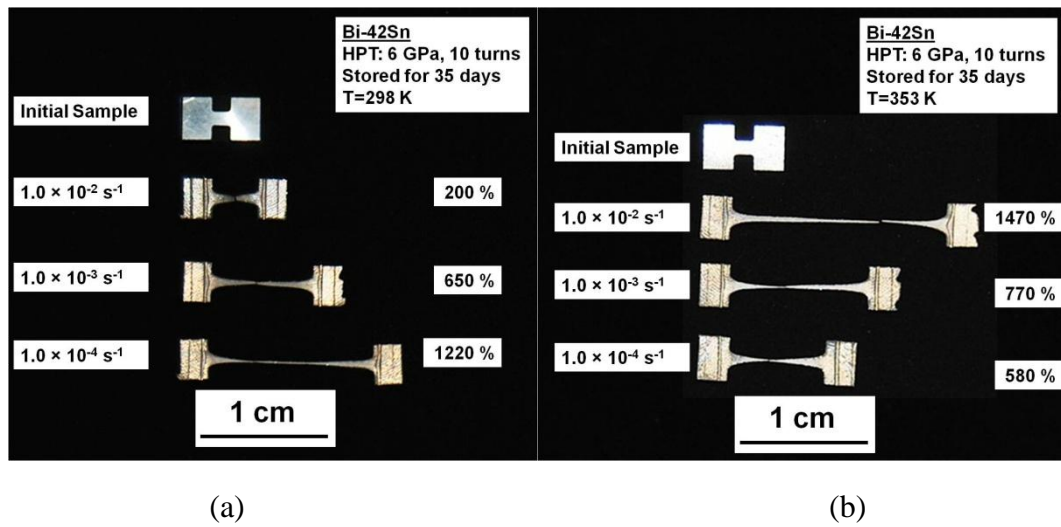
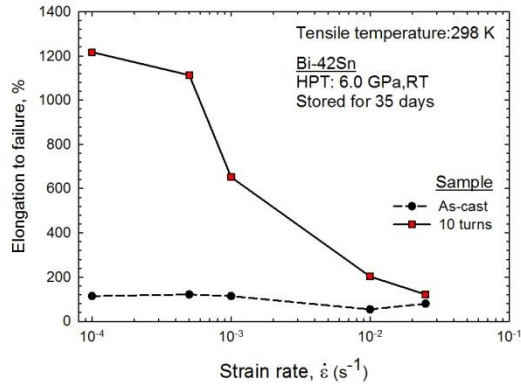
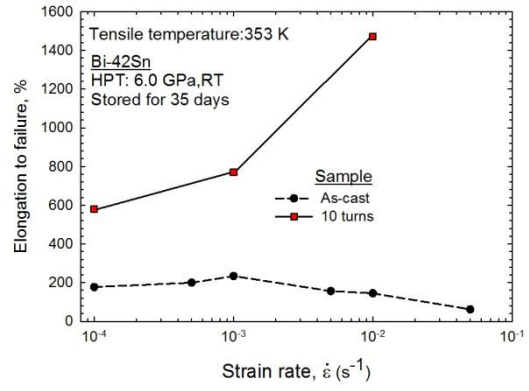


Figure 8 Appearance of specimens after HPT processing for 10 turns and storage for 35 days and then testing to failure at different initial strain rates for tests conducted at (a) 298 K and (b) 353 K.

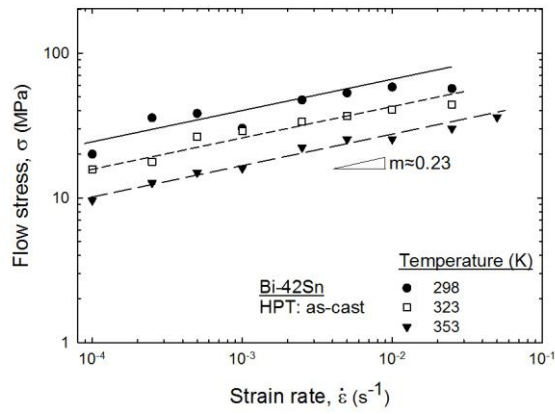


(a)

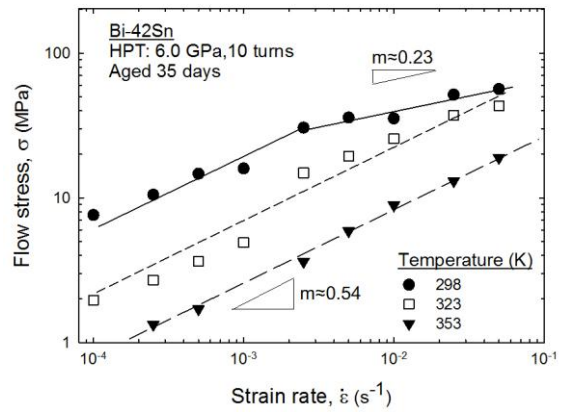


(b)

Figure 9 Elongations after testing to failure with different initial strain rates at (a) 298 K and (b) 353 K.



(a)



(b)

Figure 10 Flow stress versus strain rate at different temperatures for (a) the as-cast alloy and (b) the alloy processed by HPT and stored for 35 days: the slopes give the values of the strain rate sensitivity, m .

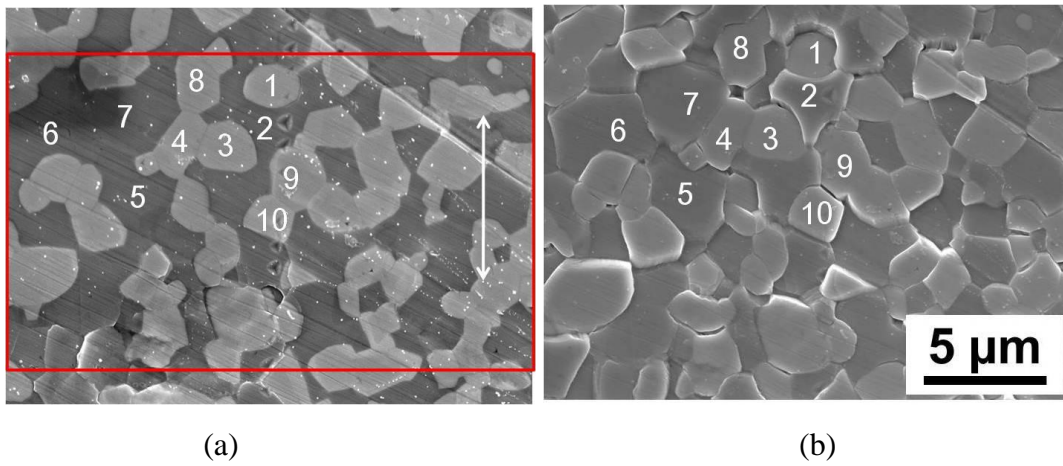


Figure 11 Microstructure after processing by HPT for 10 turns and storing for 35 days (a) before and (b) after testing to 30% strain at RT: the white arrow in (a) shows the tensile direction.