

Kaushini S. Wickramasinghe et al., Transmission Electron Microscopy Studies of the Formation of  $\text{In}_2\text{Se}_3$  Layers via Selenium Passivation of  $\text{InP}(111)\text{B}$  Substrates

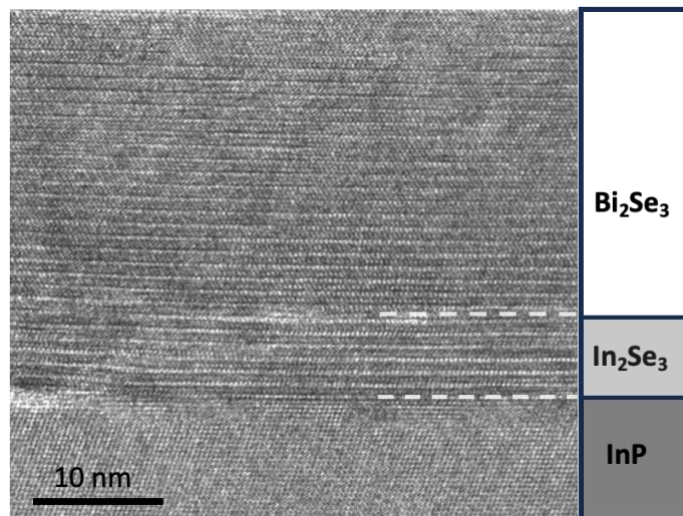


Figure 1. Cross-sectional HR-TEM image of  $\text{Bi}_2\text{Se}_3$  on  $\text{In}_2\text{Se}_3$  layer grown via selenium passivation of  $\text{InP}(111)\text{B}$  substrate showing abrupt interfaces between the layers.

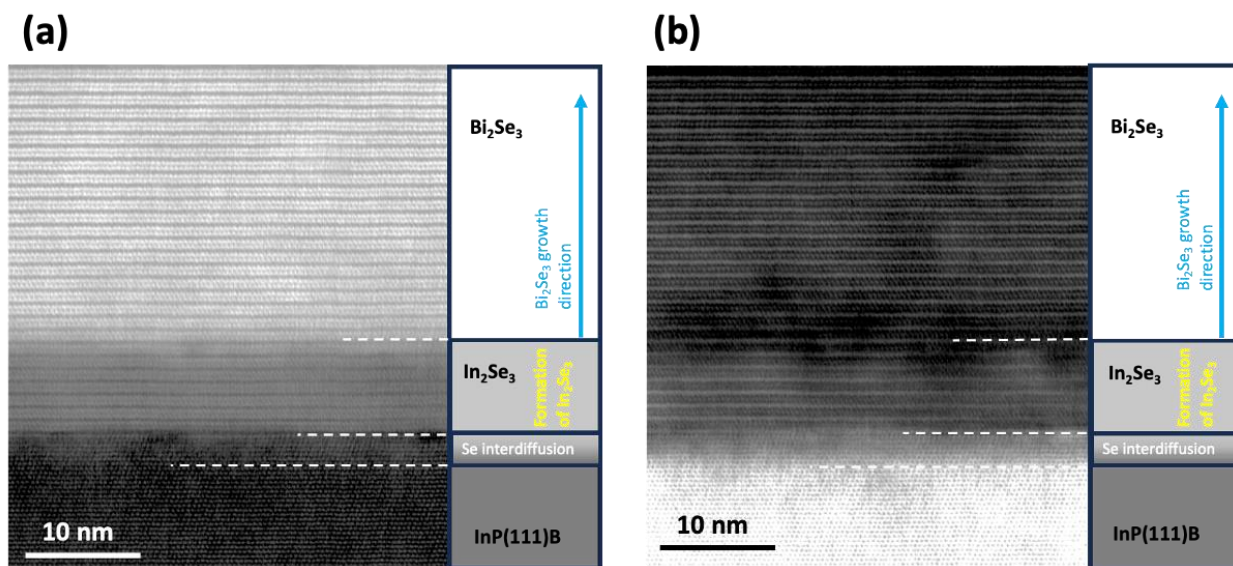


Figure 2. Cross-sectional (a)HAADF and (b) BF image of  $\text{Bi}_2\text{Se}_3$  on  $\text{In}_2\text{Se}_3$  layer grown via selenium passivation of  $\text{InP}(111)\text{B}$  substrate clearly showing abrupt interface between  $\text{Bi}_2\text{Se}_3$  and  $\text{In}_2\text{Se}_3$  layers and the zinc blende  $\text{InP}$  lattice and the rhombohedral  $\text{In}_2\text{Se}_3$  layer. Images also show selenium diffusion further into the substrate without changing the crystal structure of zinc blende  $\text{InP}$ .