

Quiz

1. How many types of lattice defects exist?
2. What is an interstitialcy and how is it different from an impurity atom?
3. What is dislocation? What is Burger vector?
4. Draw the atomic arrangement around an edge dislocation and show the extra half-plane.
5. What is the fundamental difference between edge and screw dislocation?
6. What is Burger circuit?
7. Why the ideal strength of metals is less than the actual measured values?
8. Why is the movement of dislocations compared to caterpillar?
9. How does dislocation movement produce plastic deformation?
10. How do dislocations appear when observed in an electron microscope?
11. From a dislocation mechanism point of view how can one increase the strength of metals?
12. What is meant by a polycrystalline material?
13. What is a grain?
14. Is the orientation of the crystal across a grain boundary same?
15. How do grain boundaries affect strength of a material?