

1. Screw dislocation
2. Fluid density; ~~stress, strain~~ ^{shear; strain}
3. *** $a=2R\sqrt{2}$; $V=a^3=16R^3\sqrt{2}$
4. *** $N=N_A\rho/A_{Cu} \rightarrow N_v=N e^{-Q/kT} \rightarrow 2.2 \times 10^{25}$ vacancies/m³
5. Solid; intentional impurity
6. *** $TS_{avg}=517$ MPa
7. Strain hardening
8. $\sigma = F/A_o = 816$ kPa
9. $\epsilon = \frac{l-l_o}{l_o}$; .025
10. $E = \sigma/\epsilon$; 32.6 MPa
11. Entanglement length
12. Metallic; nonmetallic
13. A=[101]; B=[110]; C=[010]
14. Molecular weights
15. *** 131000 J/mol
16. Hardness
17. Toughness
18. PMMA (polymethyl methacrylate)
19. Adhesive
20. Composites