

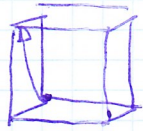
① A ete B \rightarrow sistema kubikoa

- Simplea $a = 2r$ $r = \frac{a}{2}$
- atzeratuak $4r = \sqrt{2}a$ $r = \frac{\sqrt{2}a}{4}$
- gorputzkoa $4r = \sqrt{3}a$ $r = \frac{\sqrt{3}a}{4}$

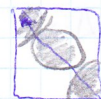
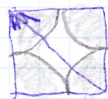
- A) $r_A = 1,858 \text{ \AA}$ $a_A = 4,2906 \text{ \AA}$

$a \neq 2r$ $4r \neq a\sqrt{2}$ $4r = a\sqrt{3} \Rightarrow \underline{\underline{\text{BCC}}}$

- B) Metate faktore lineal: 1 [101]



CS. FCC BCC



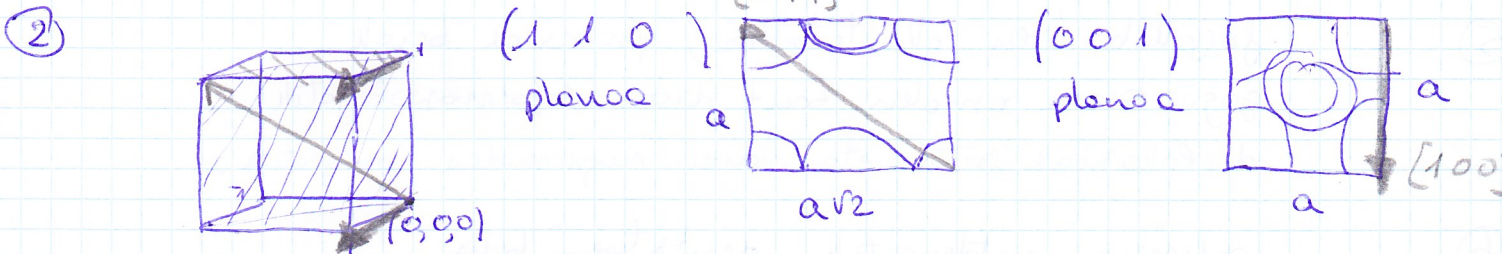
$\Rightarrow \underline{\underline{\text{FCC}}}$

$\angle \perp = \perp \angle \perp$

FCC ren metate faktorea: 0,74 - B -

BCC " " " " = 0,68 - A -

$\left. \begin{array}{l} \text{FCC} \\ \text{BCC} \end{array} \right\} \underline{\underline{\text{A materiale}}}$



$(110) + [111] \Rightarrow$ metate faktore planoa = $\frac{2r}{a^2\sqrt{2}}$

$(001) [100] \Rightarrow$ " " " = $\frac{2r}{a^2}$

Distantsia metateen artean epitaxial hedatutako $\left. \begin{array}{l} \frac{2r}{a^2\sqrt{2}} \\ \frac{2r}{a^2} \end{array} \right\} \underline{\underline{\text{Metate}}}$

③ $\frac{C_s - C_x}{C_s - C_0} = \exp \frac{x}{2\sqrt{Dt}}$

$\frac{10^{18} \text{ at/cc} - 10^{16} \text{ at/cc}}{10^{18} \text{ at/cc} - 0} = \exp \frac{x}{2\sqrt{2 \cdot 10^{-12} \cdot 3600}} = 0,99$

(3)

ef $z = 0,99 \Rightarrow z = 1,8$

$$\frac{x}{2\sqrt{2 \cdot 10^{-12} \text{ cm}^2/\text{s} \cdot 3600 \text{ s}}} = 1,8$$

$x \Rightarrow 3,05 \cdot 10^{-4} \text{ cm}$

4) a) aldeleke abiotropkoa: $Ti\alpha \leftrightarrow Ti\beta$ 832°C tara

b) 830°C $Au\% 15$ 300g
 835°C

$$830^\circ\text{C} \quad \left\{ \begin{array}{l} \alpha Ti \Rightarrow \frac{58-15}{58-7} \cdot 300\text{g} = 252\text{g } Ti\alpha \\ Ti_3Au \quad 300 - 252 = 47\text{g } Ti_3Au \end{array} \right.$$

835°C $300\text{g } Ti\beta$ (fase bakarra)

5) forjaleke bidez elkarrekin; prozesuak berak gogor berru ematen bait dio deformazioagatik, dislokazioak sortu eta horien mugimendua oztopatzen.

6) polimeroa metalurgatik deuterioaren bidez aluminio aluminatik propietate magnetikoen bidez

7) (ankeren arlo)

- matuztea = honen elkarrekin ankerrekin aplikazioan
- erreforjatua = honen elkarrekin ankerrekin aplikazioan

- 8)
- | | | | |
|---|-------------|------------------------------|-------|
| 1 | Templekele | matuztea | % 100 |
| 2 | Normalekele | perlite, bainite, (matuztea) | |
| 3 | Suberkele | perlite (lodia) | % 100 |
| 4 | — | bainite | % 100 |
| 5 | — | perlite fina | % 100 |