

**Question:**

Molybdenum at 20°C is BCC and has an atomic radius of 0.143 nm. Calculate a value for its lattice constant  $a$  in nanometer.

**Solution:**

For BCC:

$\sqrt{3} \times a_0 = 4r$ , thus

$$a_0 = \frac{4r}{\sqrt{3}} = \frac{4 \times 0.143 \text{ nm}}{\sqrt{3}} = 0.33 \text{ nm}$$