

## Exercise 2.1-4

### Derive the Formula for the Vacancy Equilibrium Concentration



Start from the formulas given, use the approximations described, and show that

$$c_v = \text{concentration of vacancies} = \frac{S_F}{k} \cdot \exp\left(-\frac{H_F}{kT}\right)$$



Would more advanced versions of Stirlings formula get better results?

Illustration



[Link to the Solution](#)