

0.1 Calcolo densità centri NV

$$\begin{cases} [N] = 10 \text{ ppm} = \frac{10}{10^6} = 10^{-5} \\ [NV] = 1\%[N] = 10^{-7} \\ \rho_{diamond} = 3.5 \text{ g/cm}^3 \\ M_C = 12.01 \text{ g/mol} \end{cases} \quad (1)$$

$$\#_{C_{atoms}/cm^3} = \frac{\rho_{diamond}}{M_C} N_{Avogadro} = 1.75 \cdot 10^{23} \text{ cm}^{-3}$$

$$\#_{NV_{atoms}/cm^3} = \#_{C_{atoms}/cm^3} [NV] = 1.75 \cdot 10^{16} \cdot 10^{-12} \mu m^{-3} = O(10^4) \mu m^{-3}$$