Physical constants

a_B	=	0.5292 Å	Bohr radius	($a_B = 0.5292 \times 10^{-10}$ m)
ε_0	=	8.8542×10^{-12} As/(Vm)	absolute dielectric constant	
e	=	1.6022×10^{-19} C	elementary charge	
c	=	2.9979×10^8 m/s	velocity of light in vacuum	
E_{Ryd}	=	13.606 eV	Rydberg energy	
g	=	9.8067 m/s^2	acceleration on earth at sea level due to gravity	
G	=	6.6873×10^{-11} m^3/(kg s^2)	gravitational constant ($F = G\,M\,m/r^2$)	
h	=	6.6261×10^{-34} Js	Planck constant	($h = 4.1356 \times 10^{-15}$ eVs)
$\hbar$	=	1.0546×10^{-34} Js	$\hbar = h/(2\pi)$	($\hbar = 6.5821 \times 10^{-16}$ eVs)
k	=	1.3807×10^{-23} J/K	Boltzmann constant	($k = 8.6175 \times 10^{-5}$ eV/K)
μ_0	=	1.2566×10^{-6} Vs/(Am)	absolute magnetic constant	
m_e	=	9.1094×10^{-31} kg	free electron mass	
N_{Avo}	=	6.0221×10^{23} mol^{-1}	Avogadro number	
$R = k\,N_{Avo}$	=	8.3145 J K^{-1} mol^{-1}	ideal gas constant	

Note:

The *dielectric permittivity* of a material is given by $\varepsilon = \varepsilon_r\,\varepsilon_0$ where ε_r and ε_0 are the *relative* and *absolute* dielectric permittivity, respectively.

The *magnetic permeability* of a material is given by $\mu = \mu_r\,\mu_0$ where μ_r and μ_0 are the *relative* and *absolute* magnetic permeability, respectively.

Useful conversions

$$1 \text{ eV} = 1.6022 \times 10^{-19} \text{ C V} = 1.6022 \times 10^{-19} \text{ J}$$
$$E \quad = h\nu = hc/\lambda = 1239.8 \text{ eV} / (\lambda/\text{nm})$$
$$kT \quad = 25.86 \text{ meV} \qquad (\text{at } T = 300 \text{ K})$$
$$kT \quad = 25.25 \text{ meV} \qquad (\text{at } T = 20 \text{ °C} = 293.15 \text{ K})$$