Fundamental Physical Constants — X-ray values

Quantity	Symbol	Value	Unit	Relative std. uncert. u_{r}
Cu x unit: $\lambda(\mathrm{CuK}\alpha_1)/1\,537.400$	$\mathrm{xu}(\mathrm{CuK}\alpha_1)$	$1.002\,076\,97(28) \times 10^{-13}$	m	2.8×10^{-7}
Mo x unit: $\lambda(\mathrm{MoK}\alpha_1)/707.831$	$\mathrm{xu}(\mathrm{MoK}\alpha_1)$	$1.002\,099\,52(53) \times 10^{-13}$	m	5.3×10^{-7}
Ångström star: $\lambda(\mathrm{WK}\alpha_1)/0.209\,010\,0$	Å*	$1.000\,014\,95(90) \times 10^{-10}$	m	9.0×10^{-7}
lattice parameter* of Si (in vacuum, 22.5 °C)	a	$5.431\,020\,511(89) \times 10^{-10}$	m	1.6×10^{-8}
$\{220\}$ lattice spacing of Si $a/\sqrt{8}$ (in vacuum, 22.5 °C)	d_{220}	$1.920\,155\,716(32) \times 10^{-10}$	m	1.6×10^{-8}
molar volume of Si $M(\mathrm{Si})/\rho(\mathrm{Si}) = N_{\mathrm{A}}a^3/8$ (in vacuum, 22.5 °C)	V_{m}(Si)	$1.205\,883\,199(60) \times 10^{-5}$	$\mathrm{m}^3\ \mathrm{mol}^{-1}$	4.9×10^{-8}

* This is the lattice parameter (unit cell edge length) of an ideal single crystal of naturally occurring Si free of impurities and imperfections.