

## Nanochemistry

# Did you know?

### Getting down to nanometres

One nanometre is 0.000000001 m. It can be written as 1 nm or  $1 \times 10^{-9}$  m. Here is the scale of length showing where nanometres fit in:

Small	attometre	am	0.000000000000000001 m	$1 \times 10^{-18}$ m
	femtometre	fm	0.000000000000001 m	$1 \times 10^{-15}$ m
	picometre	pm	0.000000000001 m	$1 \times 10^{-12}$ m
	<b>nanometre</b>	<b>nm</b>	<b>0.000000001 m</b>	<b><math>1 \times 10^{-9}</math> m</b>
	micrometre	$\mu\text{m}$	0.000001 m	$1 \times 10^{-6}$ m
	millimetre	mm	0.001 m	$1 \times 10^{-3}$ m
	centimetre	cm	0.01 m	$1 \times 10^{-2}$ m
	metre	m	1 m	$1 \times 10^0$ m
	decametre	dm	10 m	$1 \times 10^1$ m
	hectometre	hm	100 m	$1 \times 10^2$ m
	kilometre	km	1000 m	$1 \times 10^3$ m
	megametre	Mm	1000000 m	$1 \times 10^6$ m
	gigametre	Gm	1000000000 m	$1 \times 10^9$ m
Large	terametre	Tm	1000000000000 m	$1 \times 10^{12}$ m

The metre is the standard (SI, or *Système International d'Unités*) unit of length. Every other unit is stated as a number bigger or smaller than this. The short word put before metre is called a prefix. Many of these are from Greek. The same prefixes are used to change the unit of mass, the kilogram, into smaller and larger units. Atoms and molecules are nano- and picometre sized. Science involving nano- and pico-sized particles is called nanoscience.

