

The Latest News

How Are The Elements Named?



ENTERTAINMENT FEATURED

SCIENCE

By Alexander Baron

Group→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
↓Period																		
1	1 H																	2 He
2	3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
3	11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
4	19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
5	37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
6	55 Cs	56 Ba	* 71 Lu	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
7	87 Fr	88 Ra	* 103 Lr	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	112 Cn	113 Uut	114 Fl	115 Uup	116 Lv	117 Uus	118 Uuo
			* 57 La	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb		
			* 89 Ac	90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No		

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The father of the **periodic table** died 109 years ago this month. Dmitri Mendeleev was also born in February – 1834. Although he sorted them in order, the concept of elements had been around since ancient times when there were just the four: earth, water, air and fire, although the Greeks added a fifth, aether. By the time Mendeleev was born, things had gotten rather complicated.

In 1766, Henry Cavendish discovered hydrogen, or more properly recognised it as a discrete substance. We know now of course that hydrogen is the fundamental building block of the Universe, and by far the most abundant. Everything on this Earth including us was once hydrogen.

In spite of the classical nomenclature, real elements had been known from ancient times, and this is reflected in their atomic symbols. Gold – that most alluring of all metals – was known to the Romans as aurum, hence its atomic symbol Au. Silver was argentum – Ag. Lead was plumbum – Pb. And so on.

Salt has been known since time immemorial, but is a compound of sodium and chlorine, and it was not until 1807 that Sir Humphry Davy isolated sodium from it. It was also given a Latin name – natrium. Chlorine was isolated somewhat earlier, and was given a name meaning pale green. The trans-Uranic elements though, ie those with atomic number 93 and above, have been named somewhat differently. Uranium itself has been known since ancient times but was not isolated until 1789. It was named after the planet. Neptunium was discovered in the 1950s, and was named after the next planet out from Uranus, while Plutonium was named after a cartoon character. Seriously though, Americium was named after the Americas; the next element, Californium was named after the state and university; Curium was named after Madam Curie and her husband, who were the first to isolate radium. With element 101, Mendeleev himself was honoured – sandwiched between Albert Einstein (einsteinium) and Alfred Nobel (nobelium).

The latest addition to the periodic table is ununoctium; this has been around since only 2005, and in barely mentionable quantities. Its name is temporary. There is currently a campaign to rename one of the new elements after **Lemmy**, ie lemmium, because of the heavy metal connection. This seems unlikely to happen, but there are few others better suited, expect perhaps clintonium meaning **rare and unstable**.

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