



CHAPTER 4: PERIODIC TABLE OF ELEMENT



Extra Info

Dmitri Ivanovich Mendeleev

Dmitri Ivanovich Mendeleev was born in Tobolsk, Siberia, on February 7, 1834. He was the youngest of at least 14 children in the family.

Although other scientists such as John Newlands and Lothar Meyer had made important contributions to the first periodic table, the main credit was given to Mendeleev. He was credited as being the creator of the first version of the periodic table of elements. Unlike other contributors to the table, Mendeleev predicted the properties of elements yet to be discovered.

Since the early days of his career, he had felt that there was some type of order in the elements, and he spent more than thirteen years of his life collecting data and assembling the concept. Mendeleev was one of the first modern-day scientists that did not rely solely on his own work but rather was in correspondence with other scientists around the world in order to receive the data that they had collected. He then used their data along with his own data to arrange the elements according to their properties.

Mendeleev died from influenza in 1907 in St. Petersburg, Russia. The Mendeleev crater on the Moon and the number 101 radioactive element, mendelevium, are named after him.



Mendeleev in his study at home in 1904.

0	I	II	III	IV	V	VI	VII	VIII		
He 4.00	Li 6.94	Be 9.01	B 10.8	● C 12.0	N 14.0	O 16.0	F 19.0			
Ne 20.2	Na 23.0	Mg 24.3	Al 27.0	Si 28.1	P 31.0	● S 32.1	Cl 35.5			
Ar 40.0	K 39.1	Ca 40.1	Sc 45.0	Ti 47.9	V 50.9	Cr 52.0	Mn 54.9	● Fe 55.9	Co 58.9	Ni 58.7
Kr 83.8	Rb 85.5	Sr 87.6	Y 88.9	Zr 91.2	Nb 92.9	Mo 95.9	Tc (99)	Ru 101	Rh 103	Pd 106
Xe 131	● Ag 108	Cd 112	In 115	● Sn 119	Sb 122	Te 128	I 127			
	● Cu 63.5	Zn 65.4	Ga 69.7	Ge 72.6	As 74.9	Se 79.0	Br 79.9			
	● Au 197	● Hg 201	Ti 204	● Pb 207	Bi 209	Po (210)	At (210)	Os 194	Ir 192	Pt 195
Rn (222)	Fr (223)	Ra (226)	● Ac (227)	Th 232	● Pa (231)	U 238				

Lanthanide series
 Actinide series
 Known to Ancients

Dobereiner's triads
 Known to Mendeleev

The periodic table of elements based on Mendeleev's periodic law.