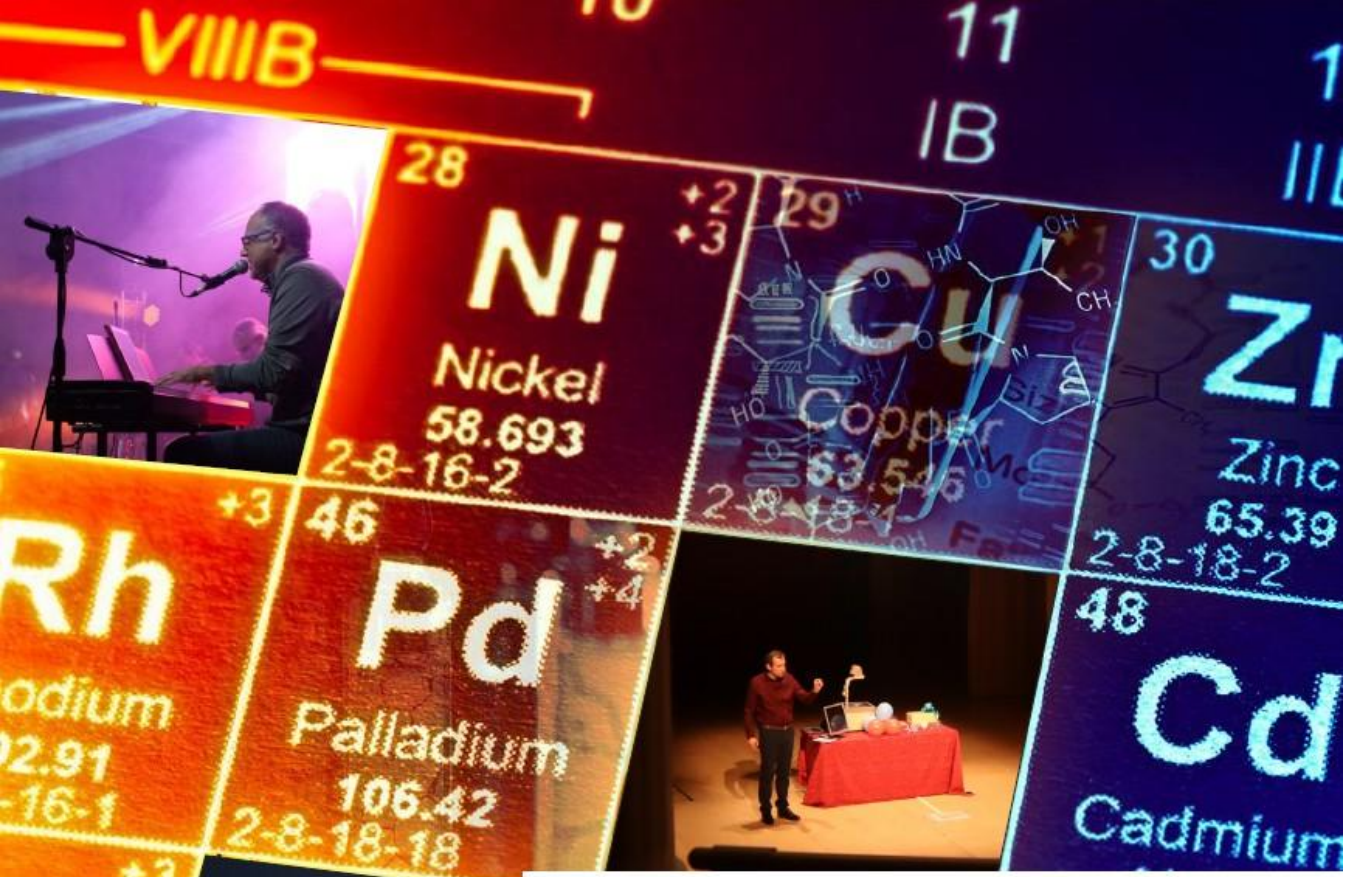


LA TAVOLA PERIODICA DEGLI ELEMENTI: STORIA E FASCINO DI UNA MAPPA

siamosapiens
Nuove Associazioni di idee

La Tavola Periodica degli elementi
raccontata con De Andrè, Guccini, Bacone, Kant
... e qualche chimico

Giovanni Morelli

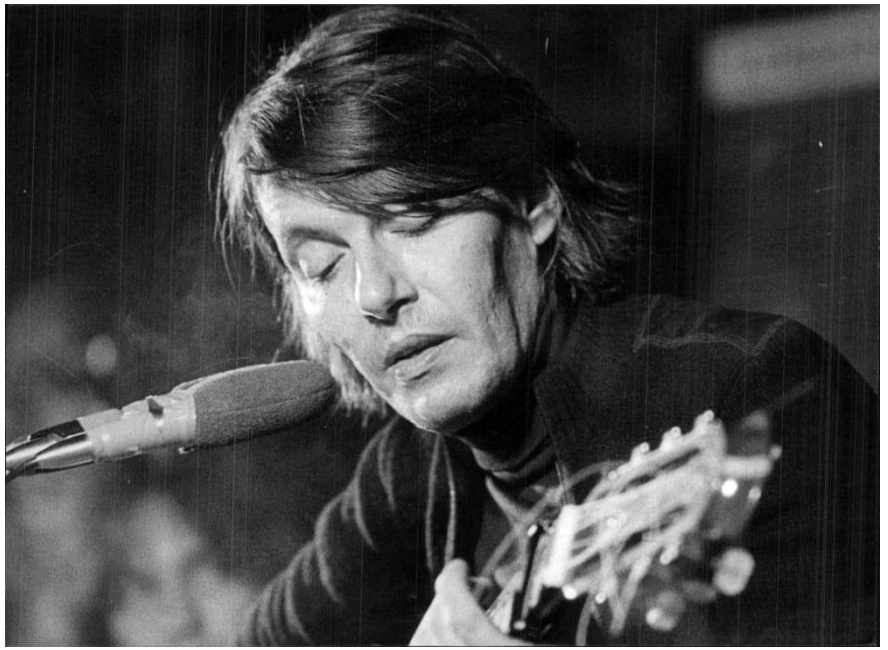
Società Chimica Italiana

Divisione Didattica Chimica

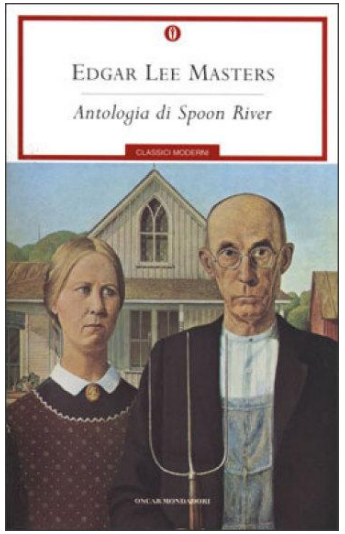
Bologna 2-3 Dicembre 2019

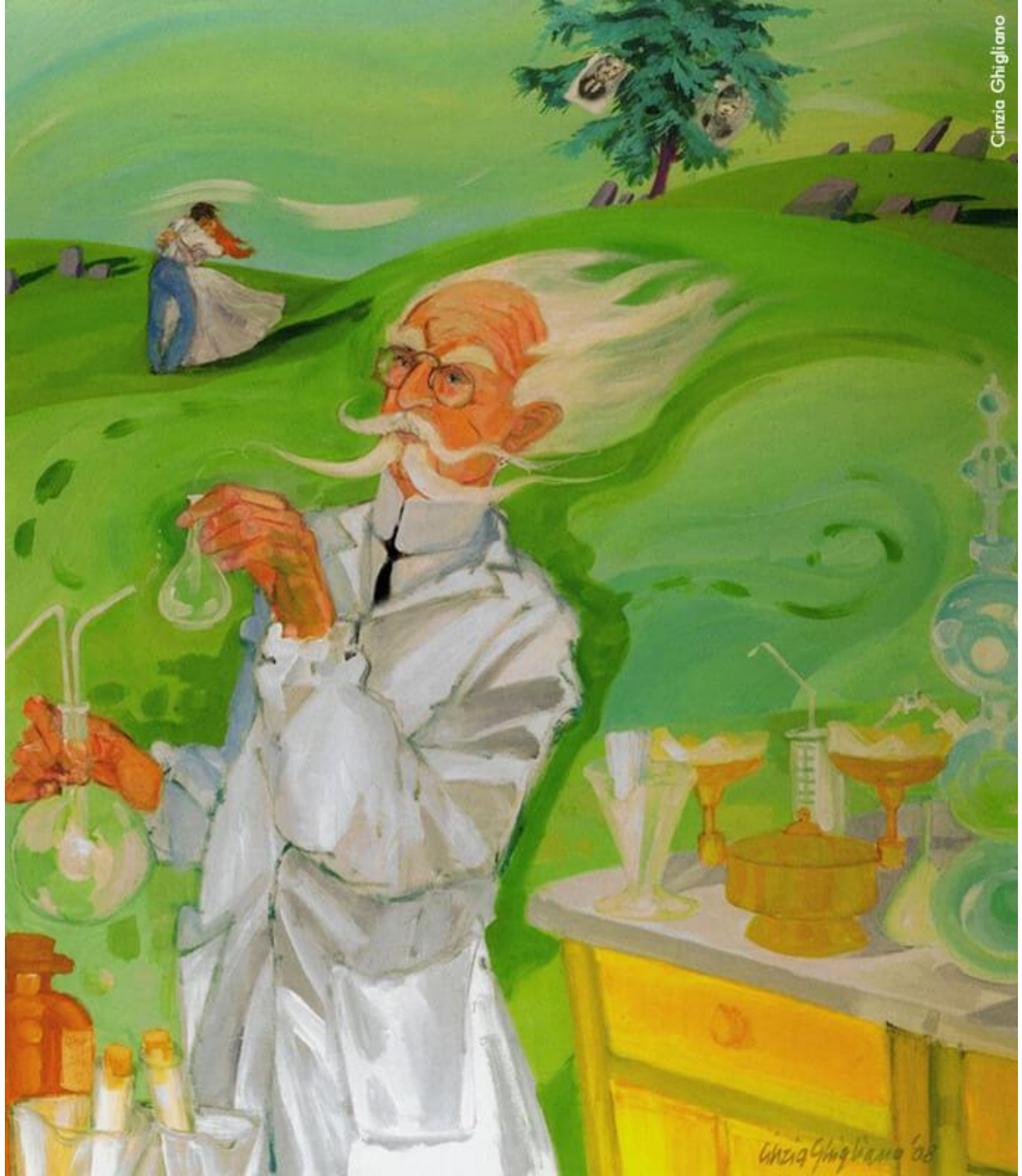
Edgar Lee Masters

Fernanda Pivano

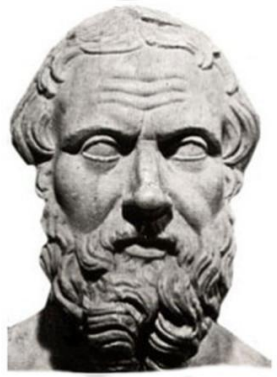


Fabrizio De André

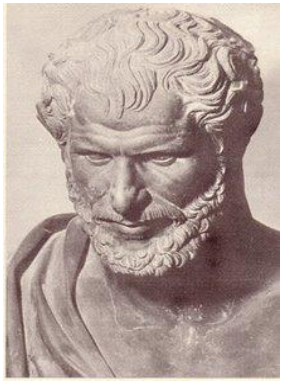



Cinzia Ghigliano
Cinzia Ghigliano '68

Materia discreta



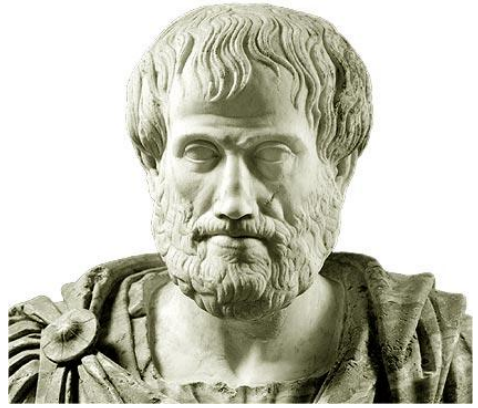
Leucippo



Democrito

Materia continua

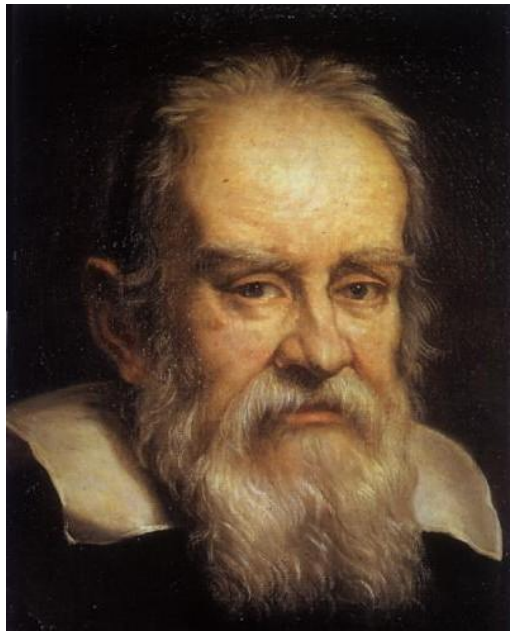
Empedocle



Aristotele

Bacone

Cartesio

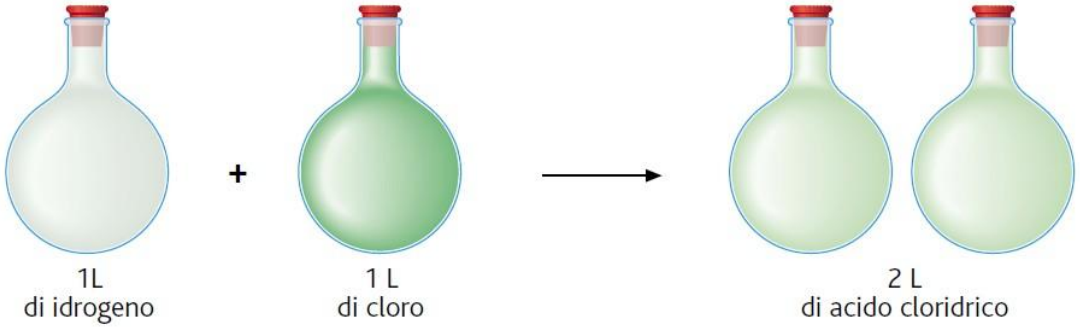


Galilei

Newton

In natura niente si crea e niente si distrugge, ma tutto si trasforma

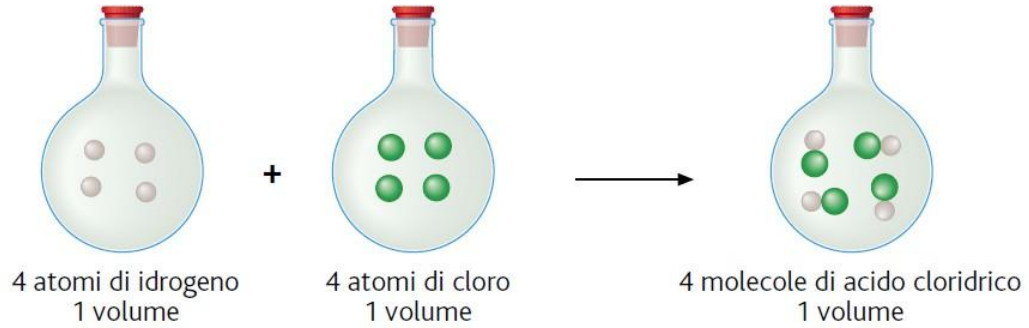
Gay-Lussac



Legge dei volumi

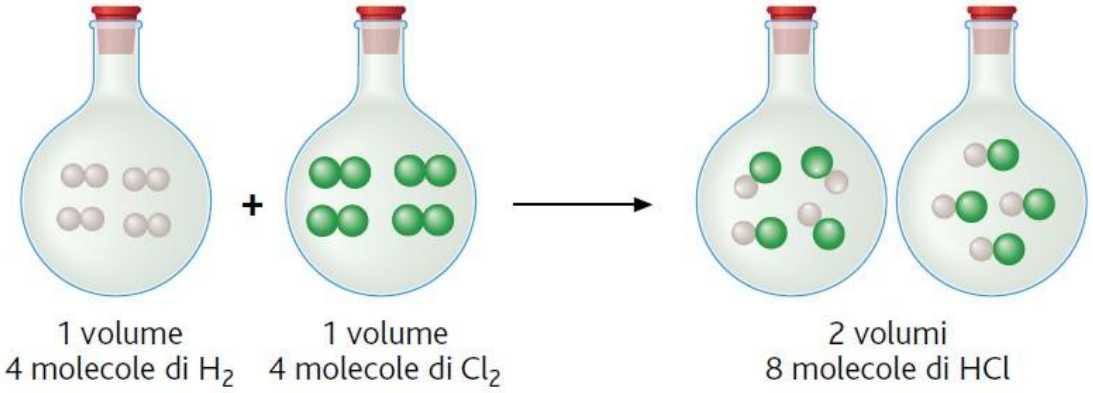
da osservazioni sperimentali

Dalton



Atomismo di Dalton

Ipotesi atomistica



Volumi uguali di gas, nelle **stesse** condizioni di pressione e temperatura contengono lo stesso numero di molecole

$$\frac{\boldsymbol{d_A}}{\boldsymbol{d_B}} = \frac{m_A / V_A}{m_B / V_B} \overset{V_A = V_B}{\underset{P_A = P_B}{\underset{T_A = T_B}{=}}} \frac{m_A}{m_B} = \frac{N\,PM_A}{N\,PM_B} = \frac{\boldsymbol{PM_A}}{\boldsymbol{PM_B}}$$

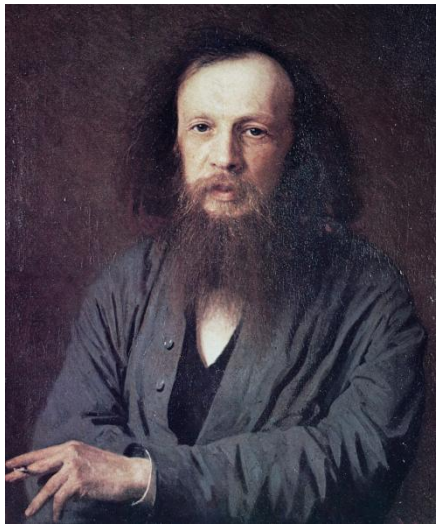
A. Avogadro

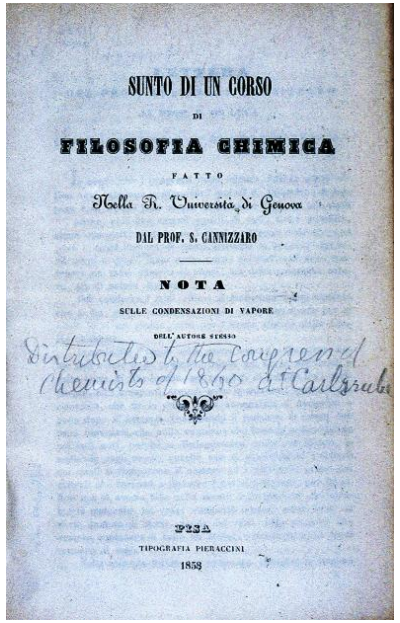
S. Cannizzaro

Karlsruhe

J. L. Mayer

D. I. Mendeleev





SUNTO DI UN CORSO

DI

FILOSOFIA CHIMICA

FATTO

Nella R. Università di Genova

DAL PROF. S. CANNIZZARO

NOTA

SULLE CONDENSAZIONI DI VAPORE

DELL'AUTORE STESSO

PISA

TIPOGRAFIA PIERACCINI

1858

La molecola è la più piccola parte di sostanza (semplice o composta) capace di esistenza indipendente e che presenta l'identità e le proprietà chimico-fisiche della sostanza

126 anni

80 anni

58 anni

Lavoisier 1743 – 1794 (51)

Berthollet 1748 – 1822 (74)

Proust 1754 – 1826 (72)

1860
Congresso di Karlsruhe

1869
Prima Tavola Periodica

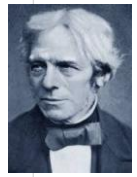
Dalton 1766 – 1844 (78)

Gay Lussac 1778 – 1850 (72)

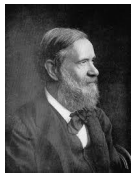
Avogadro 1776 – 1856 (80)

Berzellius 1779 – 1848 (69)

Davy 1778 – 1829 (51)



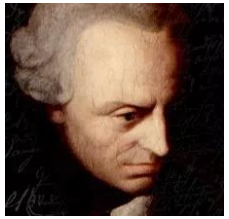
Faraday 1791 – 1867 (76)



Cannizzaro 1826 – ----

1789
Traitè Elementaire de Chimie

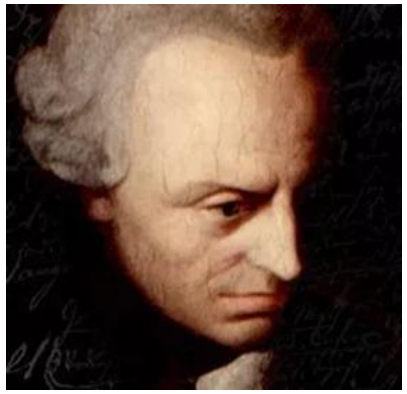
1811
Ipotesi di Avogadro



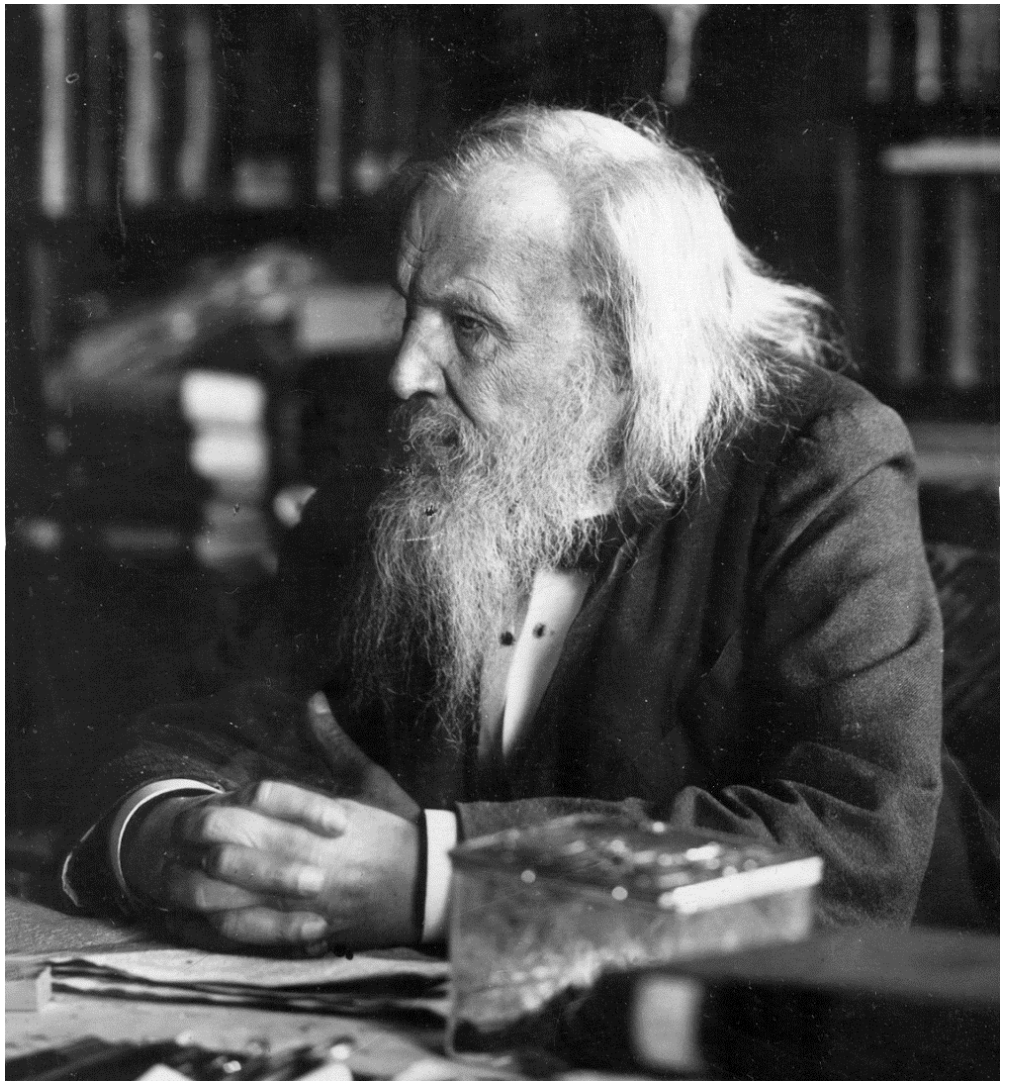
Immanuel Kant
Critica della Ragion Pura
1787

Meyer 1830 – ----

Mendeleev 1834 – ----

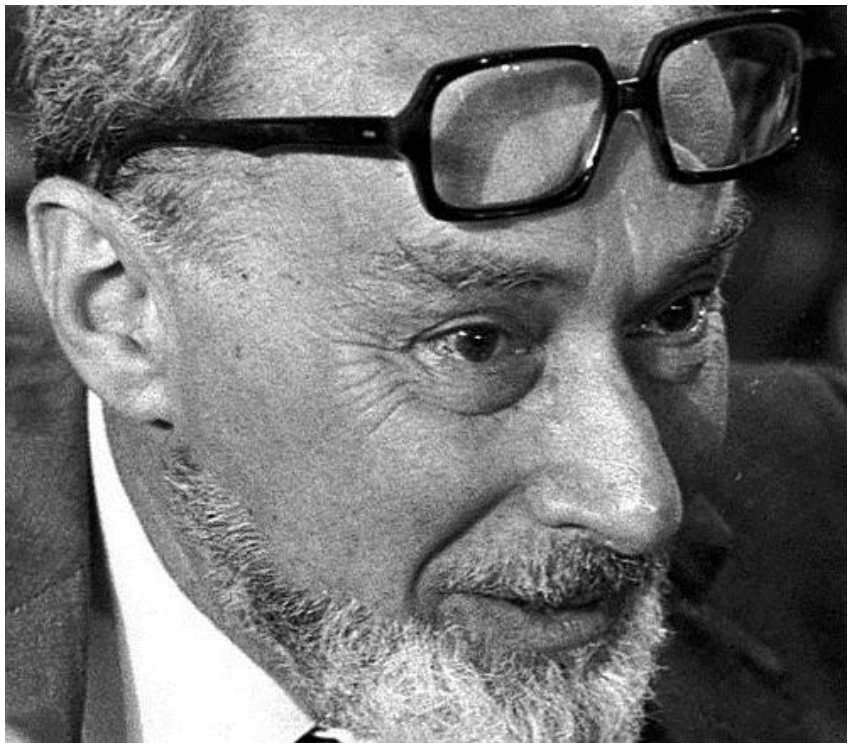


				Ti = 50	Zr = 90	? = 180		
				V = 51	Nb = 94	Ta = 182		
				Cr = 52	Mo = 96	W = 186		
				Mn = 55	Rh = 104,4	Pt = 197,4		
				Fe = 56	Ru = 104,4	Ir = 198		
				Ni = Co = 59	Pl = 106,6	Os = 199		
H = 1				Cu = 63,4	Ag = 108	Hg = 200		
	Be = 9,4	Mg = 24		Zn = 65,2	Cd = 112			
	B = 11	Al = 27,4		? = 68	Ur = 116	Au = 197?		
	C = 12	Si = 28		? = 70	Sn = 118			
	N = 14	P = 31		As = 75	Sb = 122	Bi = 210?		
	O = 16	S = 32		Se = 79,4	Te = 128?			
	F = 19	Cl = 35,5		Br = 80	J = 127			
Li = 7	Na = 23	K = 39		Rb = 85,4	Cs = 133	Tl = 204		
		Ca = 40		Sr = 87,6	Ba = 137	Pb = 207		
		? = 45		Ce = 92				
		?Er = 56		La = 94				
		?Yt = 60		Di = 95				
		?In = 75,6		Th = 118?				



Original Mendeleev table plushied in 1869

D.I. Mendeleev, Sootnoshenie svoistv a atomnym verson elementov, *Zhurnal Russkeo Fiziki-Khimicheskoe Obshchestvo,* 1, 60-77, **1869**.



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grazie