

ChemGlobe - Periodic Table of Elements

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<p>Atomic number — 43 (98.91) — Atomic mass (mean relative)</p> <p>Electron configuration — [Kr] 4d⁵ 5s² — Oxidation states</p> <p>Symbol — Tc — Radioactive</p> <p>Melting point [°C] — 2140 11.5 — Density [g/cm³], for gases [g/l] (0°C,1013mbar)</p> <p>Boiling point [°C] — 5030 * 1.9 — Electronegativity</p>																				
1																	18			
1A																	0			
1	1																	2		
	1s																	1s ²		
1	H																	He		
	-259																	-269		
	-253																	-		
2	3	4													5	6	7	8	9	10
	[He] 2s ¹	[He] 2s ²													[He] 2s ² 2p ¹	[He] 2s ² 2p ²	[He] 2s ² 2p ³	[He] 2s ² 2p ⁴	[He] 2s ² 2p ⁵	[He] 2s ² 2p ⁶
2	Li	Be													B	C	N	O	F	Ne
	181	1277													(2030)	(3550)	-210	-219	-220	-249
	1330	185													2.35	2.2	1.25	1.43	1.7	0.9
	1.0	1.5													2.0	2.5	3.0	3.5	4.0	-
3	11	12													13	14	15	16	17	18
	[Ne] 3s ¹	[Ne] 3s ²													[Ne] 3s ² 3p ¹	[Ne] 3s ² 3p ²	[Ne] 3s ² 3p ³	[Ne] 3s ² 3p ⁴	[Ne] 3s ² 3p ⁵	[Ne] 3s ² 3p ⁶
3	Na	Mg													Al	Si	P	S	Cl	Ar
	98	650													660	1410	44	119	-101	3.2
	892	174													2450	2680	280	445	-35	-183
	0.9	1.2													1.5	1.8	2.1	2.5	3.0	-
4	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
	[Ar] 4s ¹	[Ar] 4s ²	[Ar] 3d ¹ 4s ²	[Ar] 3d ² 4s ²	[Ar] 3d ³ 4s ²	[Ar] 3d ⁴ 4s ²	[Ar] 3d ⁵ 4s ¹	[Ar] 3d ⁵ 4s ²	[Ar] 3d ⁶ 4s ²	[Ar] 3d ⁷ 4s ²	[Ar] 3d ⁸ 4s ²	[Ar] 3d ⁹ 4s ¹	[Ar] 3d ¹⁰ 4s ¹	[Ar] 3d ¹⁰ 4s ²	[Ar] 3d ¹⁰ 4s ² 4p ¹	[Ar] 3d ¹⁰ 4s ² 4p ²	[Ar] 3d ¹⁰ 4s ² 4p ³	[Ar] 3d ¹⁰ 4s ² 4p ⁴		
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr		
	64	838	1539	1668	1900	1875	1245	1536	1495	1453	1083	420	30	1937	5.32	217	4.79	-7		
	760	1440	2730	3260	3450	2200	2097	3000	2900	2730	2595	906	2237	1.6	2830	1.8	685	2.4		
	0.8	1.0	1.3	1.5	1.5	1.6	1.5	1.8	1.9	1.9	1.9	1.6	1.6	1.6	1.8	2.0	2.8	2.8		
5	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54		
	[Kr] 5s ¹	[Kr] 5s ²	[Kr] 4d ¹ 5s ²	[Kr] 4d ² 5s ²	[Kr] 4d ³ 5s ²	[Kr] 4d ⁴ 5s ²	[Kr] 4d ⁵ 5s ¹	[Kr] 4d ⁵ 5s ²	[Kr] 4d ⁶ 5s ²	[Kr] 4d ⁷ 5s ²	[Kr] 4d ⁸ 5s ¹	[Kr] 4d ⁹ 5s ¹	[Kr] 4d ¹⁰ 5s ¹	[Kr] 4d ¹⁰ 5s ²	[Kr] 4d ¹⁰ 5s ² 5p ¹	[Kr] 4d ¹⁰ 5s ² 5p ²	[Kr] 4d ¹⁰ 5s ² 5p ³	[Kr] 4d ¹⁰ 5s ² 5p ⁴		
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe		
	39	768	1509	1852	2468	2610	2140	2500	1966	1552	961	156	2080	232	631	450	114	4.94		
	688	1380	2927	3580	4927	5560	5030	3900	3730	3140	2210	765	17	2270	1.8	990	2.2	-108		
	0.8	0.9	1.4	1.4	1.6	1.8	*	2.2	2.2	2.2	1.7	1.7	1.7	1.8	1.9	2.1	2.5	-		
6	55	56	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86		
	[Xe] 6s ¹	[Xe] 6s ²	[Xe] 4f ¹⁴ 5d ¹ 6s ²	[Xe] 4f ¹⁴ 5d ² 6s ²	[Xe] 4f ¹⁴ 5d ³ 6s ²	[Xe] 4f ¹⁴ 5d ⁴ 6s ²	[Xe] 4f ¹⁴ 5d ⁵ 6s ¹	[Xe] 4f ¹⁴ 5d ⁵ 6s ²	[Xe] 4f ¹⁴ 5d ⁶ 6s ²	[Xe] 4f ¹⁴ 5d ⁷ 6s ²	[Xe] 4f ¹⁴ 5d ⁸ 6s ¹	[Xe] 4f ¹⁴ 5d ⁹ 6s ¹	[Xe] 4f ¹⁴ 5d ¹⁰ 6s ¹	[Xe] 4f ¹⁴ 5d ¹⁰ 6s ²	[Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ¹	[Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ²	[Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ³	[Xe] 4f ¹⁴ 5d ¹⁰ 6s ² 6p ⁴		
6	Cs	Ba	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn		
	29	714	1652	2222	2996	3410	3180	3050	2454	1769	1063	-38	303	327	271	254	(302)	(-71)		
	690	1640	3327	5400	5425	5930	5900	5500	4500	3830	2970	357	1457	1725	1560	1962	337	-62		
	0.7	0.9	1.2	1.3	1.5	1.7	2.1	2.2	2.2	2.2	2.4	1.9	1.8	1.9	2.0	*	*	*		
7	87	88	103	104	105	106	107	108	109	110	111	112				114	116	118		
	[Rn] 7s ¹	[Rn] 7s ²	[Rn] 5f ¹⁴ 6d ¹ 7s ²	[Rn] 5f ¹⁴ 6d ² 7s ²	[Rn] 5f ¹⁴ 6d ³ 7s ²	[Rn] 5f ¹⁴ 6d ⁴ 7s ²	[Rn] 5f ¹⁴ 6d ⁵ 7s ²	[Rn] 5f ¹⁴ 6d ⁶ 7s ²	[Rn] 5f ¹⁴ 6d ⁷ 7s ²	[Rn] 5f ¹⁴ 6d ⁸ 7s ¹	[Rn] 5f ¹⁴ 6d ⁹ 7s ¹	[Rn] 5f ¹⁴ 6d ¹⁰ 7s ¹				[Rn] 5f ¹⁴ 6d ¹⁰ 7s ²	[Rn] 5f ¹⁴ 6d ¹⁰ 7s ²	[Rn] 5f ¹⁴ 6d ¹⁰ 7s ²		
7	Fr	Ra	Lr	Rf	Db	Sg	Bh	Hs	Mt	Uun	Uuu	Uub				Uuq	Uuh	Uuo		
	(27)	700	-	-	-	-	-	-	-	-	-	-				-	-	-		
	677	* 0.7	*	*	*	*	*	*	*	*	*	*				*	*	*		

6	57	58	59	60	61	62	63	64	65	66	67	68	69	70				
	[Xe] 5d ¹ 6s ²	[Xe] 4f ¹ 6s ²	[Xe] 4f ² 6s ²	[Xe] 4f ³ 6s ²	[Xe] 4f ⁴ 6s ²	[Xe] 4f ⁵ 6s ²	[Xe] 4f ⁶ 6s ²	[Xe] 4f ⁷ 6s ²	[Xe] 4f ⁸ 6s ²	[Xe] 4f ⁹ 6s ²	[Xe] 4f ¹⁰ 6s ²	[Xe] 4f ¹¹ 6s ²	[Xe] 4f ¹² 6s ²	[Xe] 4f ¹³ 6s ²				
6	Lanthanoids	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb			
	920	6.17	795	6.67	935	6.77	1024	7.00	(1027)	7.22	1072	7.54	828	5.26	1312	7.89	1356	8.27
	3470	1.1	3468	1.1	3127	1.1	3027	1.2	2460	*	1790	1.2	1439	*	3000	1.1	2800	1.2
	0.7	0.9	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
7	89	90	91	92	93	94	95	96	97	98	99	100	101	102				
	[Rn] 6d ¹ 7s ²	[Rn] 6d ² 7s ²	[Rn] 5f ¹⁴ 6d ¹ 7s ²	[Rn] 5f ¹⁴ 6d ² 7s ²	[Rn] 5f ¹⁴ 6d ³ 7s ²	[Rn] 5f ¹⁴ 6d ⁴ 7s ²	[Rn] 5f ¹⁴ 6d ⁵ 7s ²	[Rn] 5f ¹⁴ 6d ⁶ 7s ²	[Rn] 5f ¹⁴ 6d ⁷ 7s ²	[Rn] 5f ¹⁴ 6d ⁸ 7s ²	[Rn] 5f ¹⁴ 6d ⁹ 7s ²	[Rn] 5f ¹⁴ 6d ¹⁰ 7s ²	[Rn] 5f ¹⁴ 6d ¹⁰ 7s ²	[Rn] 5f ¹⁴ 6d ¹⁰ 7s ²				
7	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No				
	1050	10.1	11750	11.7	(1230)	15.4	1132	19.07	637	19.5	640	19.81	994	13.7				
	*	1.1	3850	* 1.3	-	* 1.4	3818	* 1.4	3900	* 1.3	3235	* 1.3	-	-				

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ChemGlobe

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Thank you

This printable "ChemGlobe - Periodic Table of the Elements" file is based on the original work of Nick Donati. He gave the source file as a present to the ChemGlobe website. The file was then modified and adjusted to the layout and content of the ChemGlobe website. Nick Donati can be reached by visiting his website at <http://ohmu.ch/>.

Many mistakes on this file have been corrected in the meantime, thanks to error reports.

Thank you very much!

Updates

For updates, visit <http://chemglobe.org/periodictable/>. This file dates January 23rd 2014.

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