

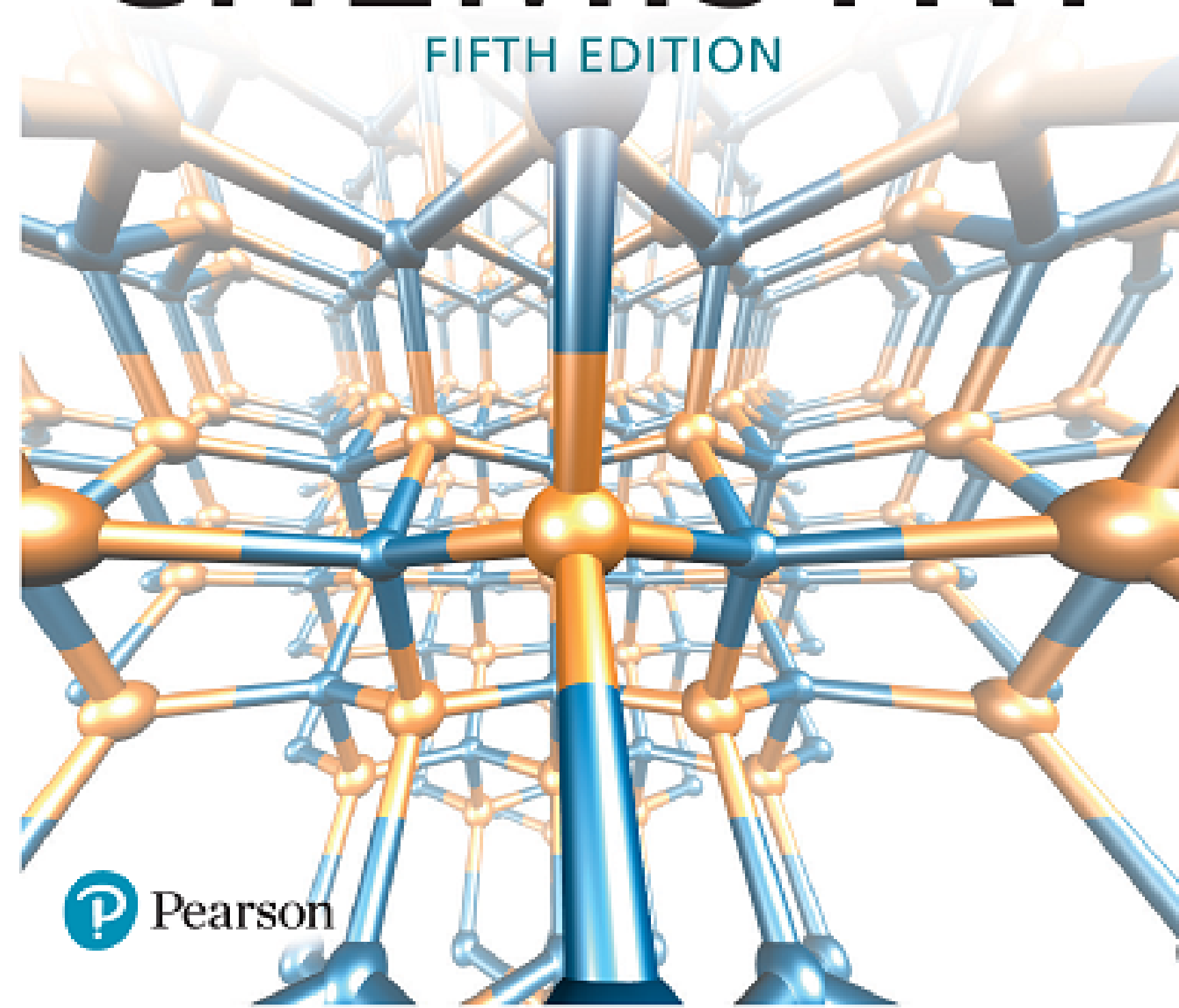
CATHERINE E. HOUSECROFT & ALAN G. SHARPE

INORGANIC CHEMISTRY

FIFTH EDITION



Pearson



Elements

Element	Symbol	Atomic number, Z	Relative atomic mass, $A_r^s/\text{g mol}^{-1}$	Element	Symbol	Atomic number, Z	Relative atomic mass, $A_r^s/\text{g mol}^{-1}$	Element	Symbol	Atomic number, Z	Relative atomic mass, $A_r^s/\text{g mol}^{-1}$
Actinium	Ac	89	[227]	Hafnium	Hf	72	178.49	Praseodymium	Pr	59	140.91
Aluminium	Al	13	26.98	Hassium	Hs	108	[270]	Promethium	Pm	61	[145]
Americium	Am	95	[243]	Helium	He	2	4.00	Protactinium	Pa	91	231.04
Antimony	Sb	51	121.76	Holmium	Ho	67	164.93	Radium	Ra	88	[226]
Argon	Ar	18	39.95	Hydrogen	H	1	1.008	Radon	Rn	86	[222]
Arsenic	As	33	74.92	Indium	In	49	114.82	Rhenium	Re	75	186.21
Astatine	At	85	[210]	Iodine	I	53	126.90	Rhodium	Rh	45	102.91
Barium	Ba	56	137.33	Iridium	Ir	77	192.22	Roentgenium	Rg	111	[281]
Berkelium	Bk	97	[247]	Iron	Fe	26	55.85	Rubidium	Rb	37	85.47
Beryllium	Be	4	9.01	Krypton	Kr	36	83.80	Ruthenium	Ru	44	101.07
Bismuth	Bi	83	208.98	Lanthanum	La	57	138.91	Rutherfordium	Rf	104	[267]
Bohrium	Bh	107	[270]	Lawrencium	Lr	103	[262]	Samarium	Sm	62	150.36
Boron	B	5	10.81	Lead	Pb	82	207.2	Scandium	Sc	21	44.96
Bromine	Br	35	79.91	Lithium	Li	3	6.94	Seaborgium	Sg	106	[269]
Cadmium	Cd	48	112.41	Livermorium	Lv	116	[293]	Selenium	Se	34	78.97
Caesium	Cs	55	132.91	Lutetium	Lu	71	174.97	Silicon	Si	14	28.09
Calcium	Ca	20	40.08	Magnesium	Mg	12	24.31	Silver	Ag	47	107.87
Californium	Cf	98	[251]	Manganese	Mn	25	54.94	Sodium	Na	11	22.99
Carbon	C	6	12.01	Meitnerium	Mt	109	[278]	Strontium	Sr	38	87.62
Cerium	Ce	58	140.12	Mendelevium	Md	101	[258]	Sulfur	S	16	32.06
Chlorine	Cl	17	35.45	Mercury	Hg	80	200.59	Tantalum	Ta	73	180.95
Chromium	Cr	24	52.00	Molybdenum	Mo	42	95.95	Technetium	Tc	43	[97]
Cobalt	Co	27	58.93	Moscovium	Mc	115	[289]	Tellurium	Te	52	127.60
Copernicium	Cn	112	[285]	Neodymium	Nd	60	144.24	Tennessee	Ts	117	[294]
Copper	Cu	29	63.54	Neon	Ne	10	20.18	Terbium	Tb	65	158.93
Curium	Cm	96	[247]	Neptunium	Np	93	[237]	Thallium	Tl	81	204.38
Darmstadtium	Ds	110	[281]	Nickel	Ni	28	58.69	Thorium	Th	90	232.04
Dubnium	Db	105	[270]	Nihonium	Nh	113	[285]	Thulium	Tm	69	168.93
Dysprosium	Dy	66	162.50	Niobium	Nb	41	92.91	Tin	Sn	50	118.71
Einsteinium	Es	99	[252]	Nitrogen	N	7	14.01	Titanium	Ti	22	47.87
Erbium	Er	68	167.26	Nobelium	No	102	[259]	Tungsten	W	74	183.84
Europtium	Eu	63	151.96	Oganesson	Og	118	[294]	Uranium	U	92	238.03
Fermium	Fm	100	[257]	Osmium	Os	76	190.23	Vanadium	V	23	50.94
Flerovium	Fl	114	[289]	Oxygen	O	8	16.00	Xenon	Xe	54	131.29
Fluorine	F	9	19.00	Palladium	Pd	46	106.42	Ytterbium	Yb	70	173.04
Francium	Fr	87	[223]	Phosphorus	P	15	30.97	Yttrium	Y	39	88.91
Gadolinium	Gd	64	157.25	Platinum	Pt	78	195.08	Zinc	Zn	30	65.38
Gallium	Ga	31	69.72	Plutonium	Pu	94	[244]	Zirconium	Zr	40	91.22
Germanium	Ge	32	72.63	Polonium	Po	84	[209]				
Gold	Au	79	196.97	Potassium	K	19	39.10				

^sWhere an element does not possess a stable isotope, a mass number in [] is given; the mass number given is for the longest-lived isotope of the element. For each of Th, Pa and U, the value of A_r^s is based on the terrestrial isotopic composition.

Periodic table

		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18																		
		Atomic number, Z		Element symbol		Relative atomic mass, A _r																																																
1	1	H	1.008	2	He	4.00																																																
3	3	Li	6.94	4	Be	9.01																																																
11	11	Na	22.99	12	Mg	24.31																																																
19	19	K	39.10	20	Ca	40.08	21	Sc	44.96	22	Ti	47.87	23	V	50.94	24	Cr	52.00	25	Mn	54.94	26	Fe	55.85	27	Co	58.93	28	Ni	58.69	29	Cu	63.54	30	Zn	65.38	31	Ga	69.72	32	Ge	72.63	33	As	74.92	34	Se	78.97	35	Br	79.91	36	Kr	83.80
37	37	Rb	85.47	38	Sr	87.62	39	Y	88.91	40	Zr	91.22	41	Nb	92.91	42	Mo	95.95	43	Tc	[97]	44	Ru	101.07	45	Rh	102.91	46	Pd	106.42	47	Ag	107.87	48	Cd	112.41	49	In	114.82	50	Sn	118.71	51	Sb	121.76	52	Te	127.60	53	I	126.90	54	Xe	131.29
55	55	Cs	132.91	56	Ba	137.33	57	La-Lu	178.49	72	Hf	178.49	73	Ta	180.95	74	W	183.84	75	Re	186.21	76	Os	190.23	77	Ir	192.22	78	Pt	195.08	79	Au	196.97	80	Hg	200.59	81	Tl	204.38	82	Pb	207.2	83	Bi	208.98	84	Po	[209]	85	At	[210]	86	Rn	[222]
87	87	Fr	[223]	88	Ra	[226]	89	Ac-Lr	231.04	104	Rf	[267]	105	Db	[270]	106	Sg	[269]	107	Bh	[270]	108	Hs	[270]	109	Mt	[278]	110	Ds	[281]	111	Rg	[281]	112	Cn	[285]	113	Nh	[285]	114	Fl	[289]	115	Mc	[289]	116	Lv	[293]	117	Ts	[294]	118	Og	[294]

Lanthanoids	57	La	138.91	58	Ce	140.12	59	Pr	140.91	60	Nd	144.24	61	Pm	[145]	62	Sm	150.36	63	Eu	151.96	64	Gd	157.25	65	Tb	158.93	66	Dy	162.50	67	Ho	164.93	68	Er	167.26	69	Tm	168.93	70	Yb	173.04	71	Lu	174.97
Actinoids	89	Ac	[227]	90	Th	232.04	91	Pa	231.04	92	U	238.03	93	Np	[237]	94	Pu	[244]	95	Am	[243]	96	Cm	[247]	97	Bk	[247]	98	Cf	[251]	99	Es	[252]	100	Fm	[257]	101	Md	[258]	102	No	[259]	103	Lr	[262]

Mass numbers in [] refer to elements which possess no stable nuclides; the mass number given is for the longest-lived isotope of the element. For each of Th, Pa and U, the value of A_r is based on the terrestrial isotopic composition.

Visit the *Inorganic Chemistry, fifth edition*, Companion Website at www.pearsoned.co.uk/housecroft to find valuable **student** learning material including:

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- Rotatable three-dimensional structures taken from the book
- Interactive periodic table

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