

תומרים אלקטרוניים

הרצאה מס' 5

ד"ר אירית יובילר

המכללה האקדמית להנדסה

סמי שמעון

המחלקה להנדסת חשמל ואלקטרוניקה

The Periodic Table of the Elements

Legend:

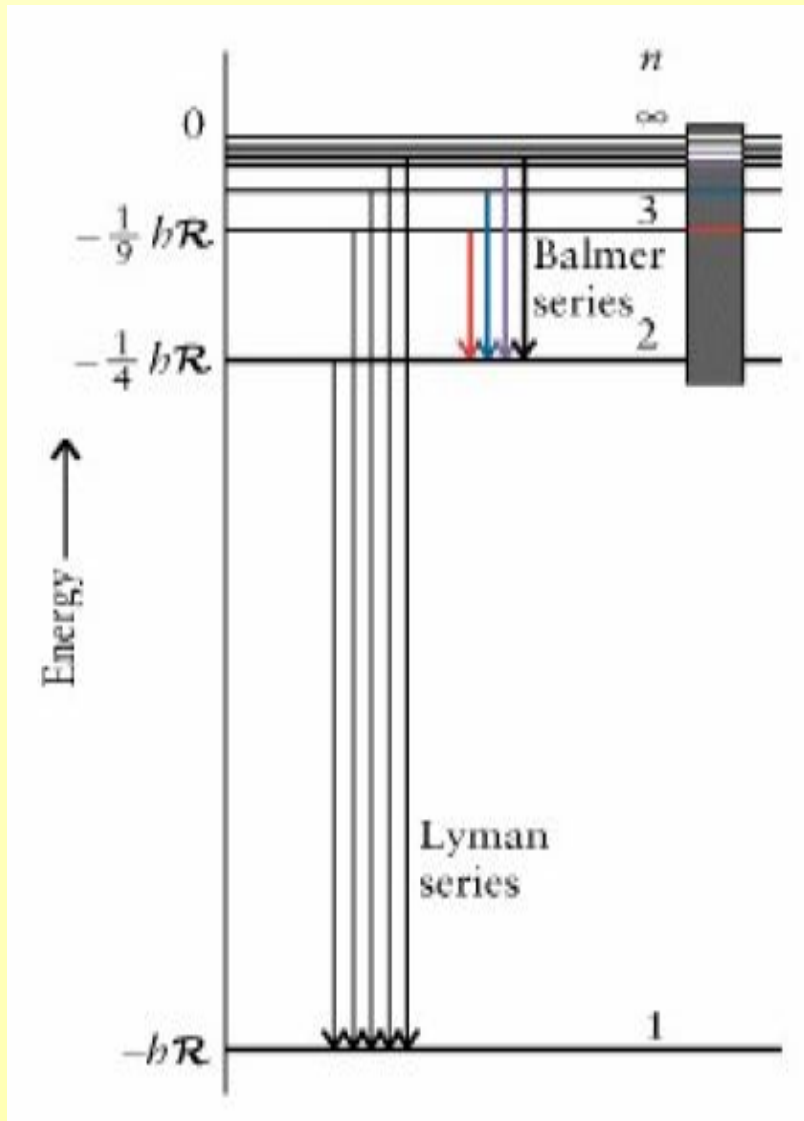
- Metal (Red)
- Semimetal (Green)
- Nonmetal (Yellow)

Callout for Carbon (C):

- Atomic number: 6
- Symbol: C
- Atomic weight: 12.01

1 H 1.008																	18 He 4.003
3 Li 6.941	4 Be 9.012											5 B 10.81	6 C 12.01	7 N 14.01	8 O 16.00	9 F 19.00	10 Ne 20.18
11 Na 22.99	12 Mg 24.31											13 Al 26.98	14 Si 28.09	15 P 30.97	16 S 32.07	17 Cl 35.45	18 Ar 39.95
19 K 39.10	20 Ca 40.08	21 Sc 44.96	22 Ti 47.88	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 63.55	30 Zn 65.39	31 Ga 69.72	32 Ge 72.61	33 As 74.92	34 Se 78.96	35 Br 79.90	36 Kr 83.80
37 Rb 85.47	38 Sr 87.62	39 Y 88.91	40 Zr 91.22	41 Nb 92.91	42 Mo 95.94	43 Tc 98.91	44 Ru 101.1	45 Rh 102.9	46 Pd 106.4	47 Ag 107.9	48 Cd 112.4	49 In 114.8	50 Sn 118.7	51 Sb 121.8	52 Te 127.6	53 I 126.9	54 Xe 131.3
55 Cs 132.9	56 Ba 137.3	71 Lu 175.1	72 Hf 178.5	73 Ta 180.9	74 W 183.8	75 Re 186.2	76 Os 190.2	77 Ir 192.2	78 Pt 195.1	79 Au 197.0	80 Hg 200.6	81 Tl 204.4	82 Pb 207.2	83 Bi 209.0	84 Po 209.0	85 At 210.0	86 Rn 222.0
87 Fr 223.0	88 Ra 226.0	103 Lr 262.1	104 Rf 261.1	105 Db 262.1	106 Sg 263.1	107 Bh 264.1	108 Hs 265.1	109 Mt 268	110 Uun 268	111 Uuu 272	112 Uub 277	113 Uut	114 Uuq 289	115 Uup	116 Uuh 288	117 Uus	118 Uuo 293
		57 La 138.9	58 Ce 140.1	59 Pr 140.9	60 Nd 144.2	61 Pm 144.9	62 Sm 150.4	63 Eu 152.1	64 Gd 157.3	65 Tb 158.9	66 Dy 162.5	67 Ho 164.9	68 Er 167.3	69 Tm 168.9	70 Yb 173.1		
		89 Ac 227.1	90 Th 232.0	91 Pa 231.1	92 U 238.1	93 Np 237.0	94 Pu 244.1	95 Am 243.1	96 Cm 247.1	97 Bk 247.1	98 Cf 251.1	99 Es 252.0	100 Fm 257.1	101 Md 258.1	102 No 259.1		

רמות אנרגיה מותרות באטום מימן



$$E = -\frac{hR_H}{n^2} \quad \dots, n = 1, 2$$

קבוע רידברג עבור מימן:

$$R_H = 3.29 \cdot 10^{15} \text{ Hz}$$

מספרים קוונטים

- (1) n – principal quantum number
- (2) l - orbital angular momentum quantum number
- (3) m_l – magnetic quantum number
- (4) m_s – spin magnetic quantum number

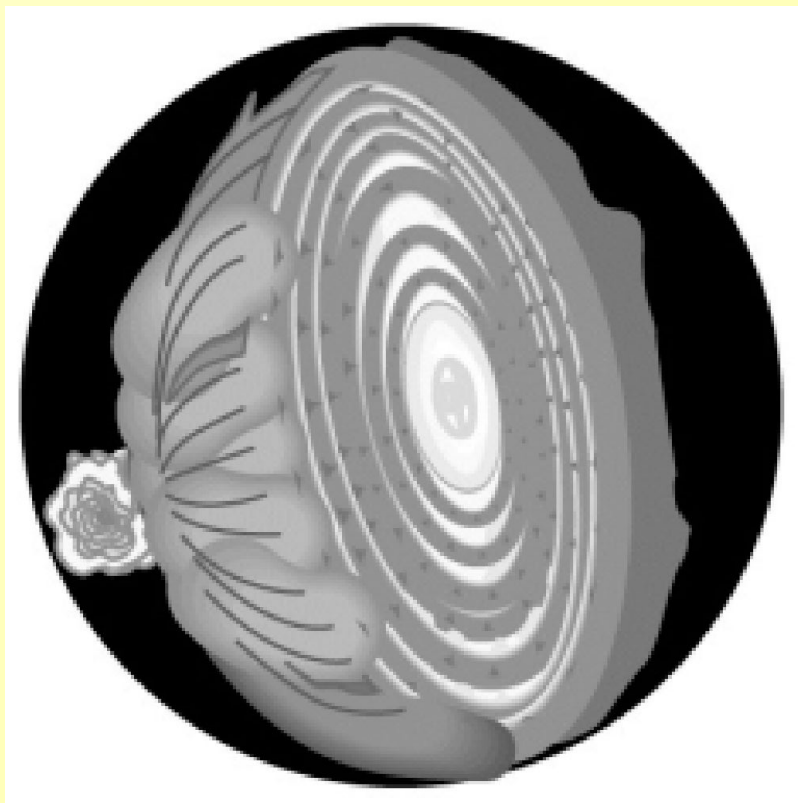
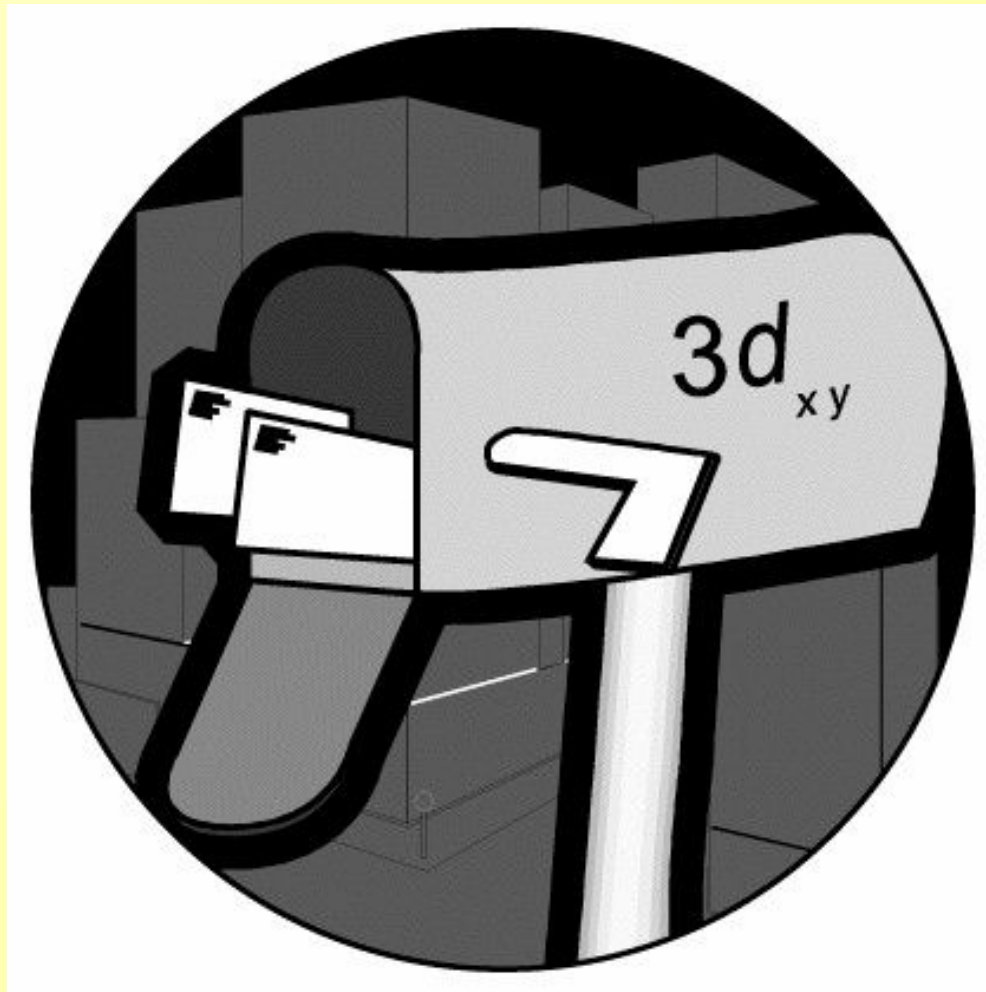
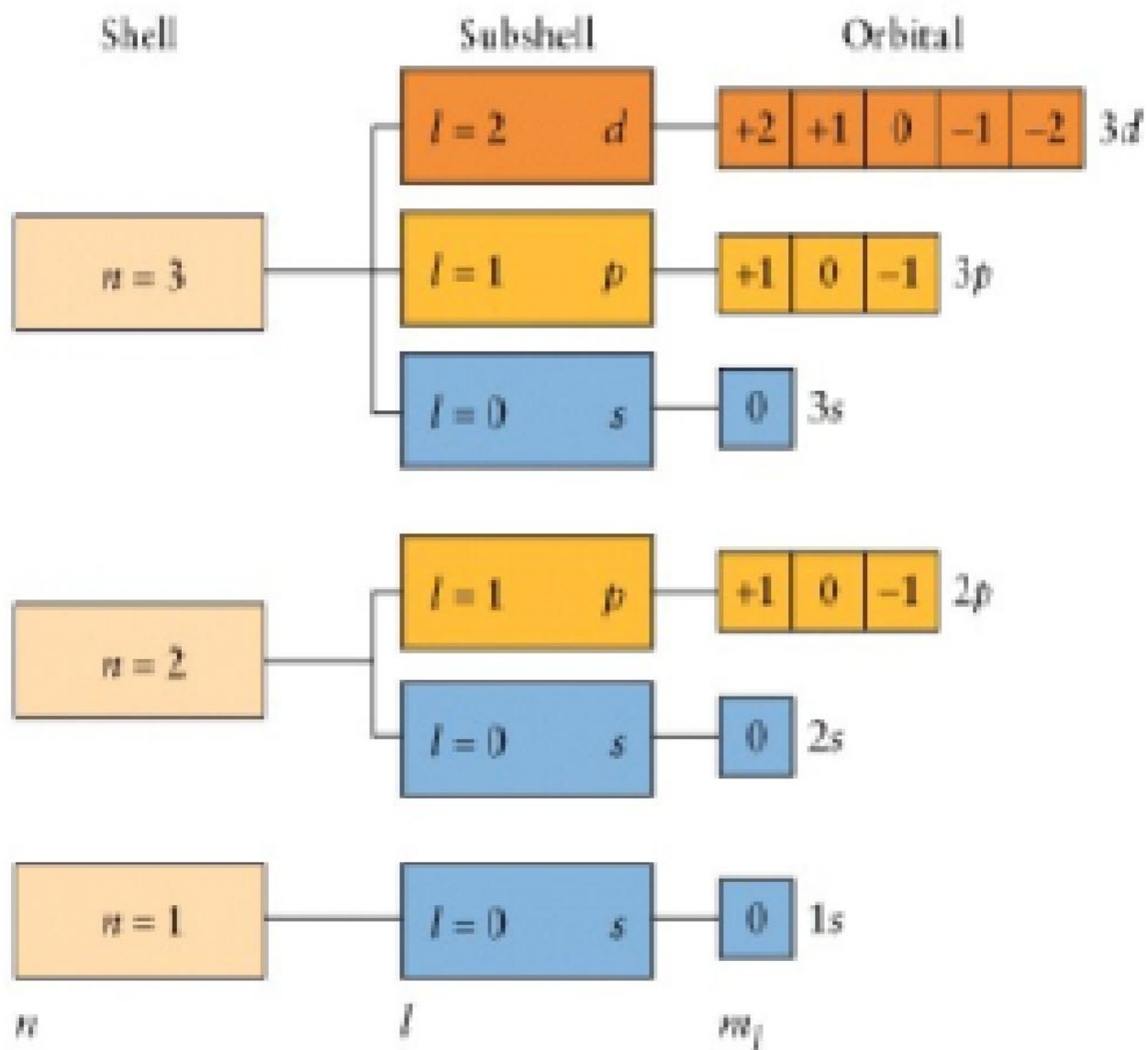


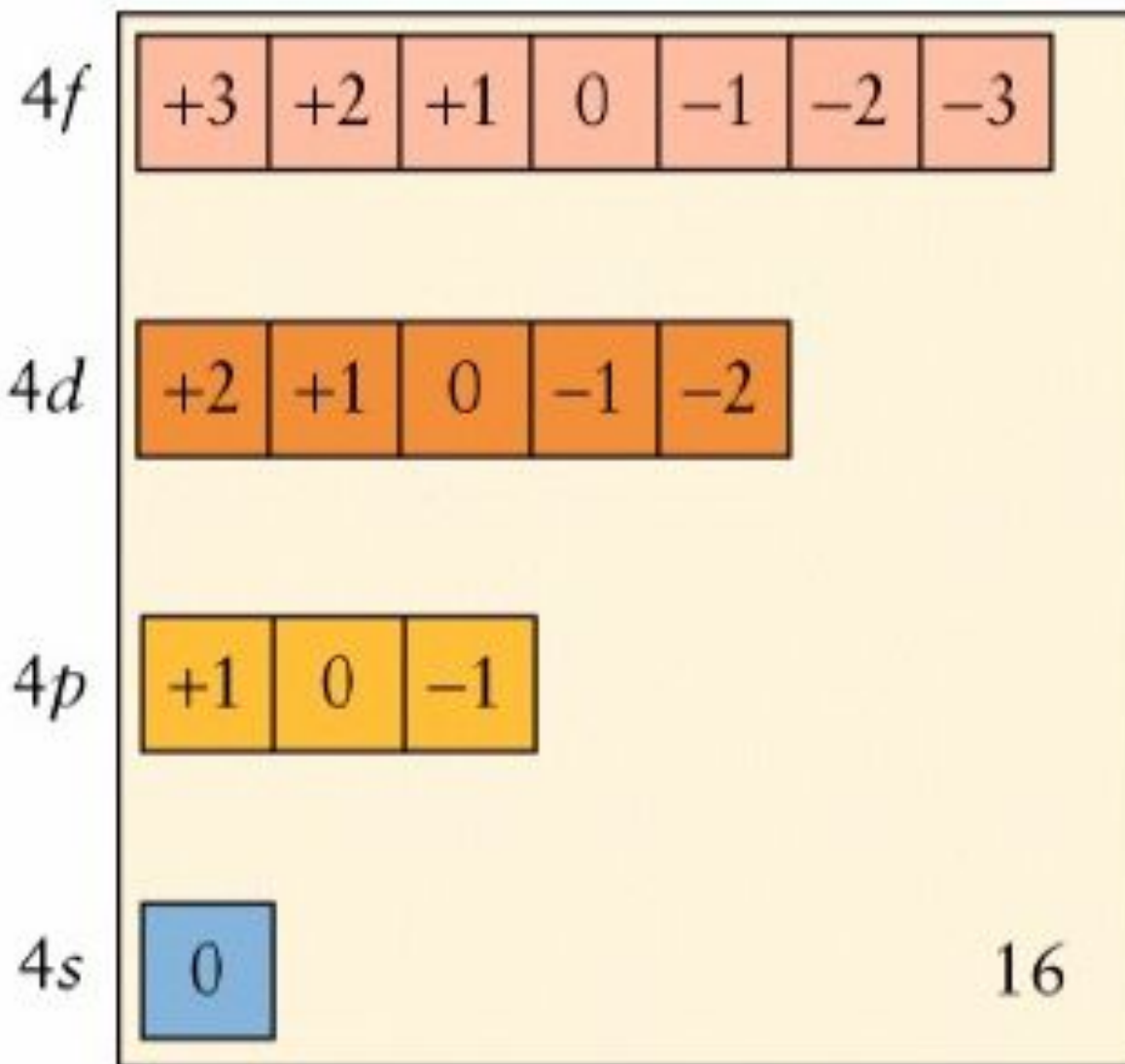
Table 7.3 Correspondence of the orbital angular momentum quantum number and subshell

l	Subshell label
0	s
1	p
2	d
3	f
4	g
5	h

אנלוגיה







Electron Spin

