

Periodensystem der Elemente

Alkalimetalle	Erdalkalimetalle	Halogene	Edelgase	Übergangsmetalle
Metalle	Halbmetalle	Nichtmetalle	Lanthanoide	Actinoide

IA																						VIIIA	
1	1,0079 H Wasserstoff																					2 4,0026 He Helium	
2	3 6,941 Li Lithium	4 9,0122 Be Beryllium																					
3	11 22,990 Na Natrium	12 24,305 Mg Magnesium																					
4	19 39,098 K Kalium	20 40,078 Ca Calcium	21 44,956 Sc Scandium	22 47,867 Ti Titan	23 50,942 V Vanadium	24 51,996 Cr Chrom	25 54,938 Mn Mangan	26 55,845 Fe Eisen	27 58,933 Co Cobalt	28 58,693 Ni Nickel	29 63,546 Cu Kupfer	30 65,39 Zn Zink	31 69,723 Ga Gallium	32 72,64 Ge Germanium	33 74,922 As Arsen	34 78,96 Se Selen	35 79,904 Br Brom	36 83,80 Kr Krypton					
5	37 85,468 Rb Rubidium	38 87,62 Sr Strontium	39 88,906 Y Yttrium	40 91,224 Zr Zirkonium	41 92,906 Nb Niob	42 95,94 Mo Molybdän	43 (97) Tc Technetium	44 101,0 Ru Ruthenium	45 102,91 Rh Rhodium	46 106,42 Pd Palladium	47 107,87 Ag Silber	48 112,41 Cd Cadmium	49 114,82 In Indium	50 118,71 Sn Zinn	51 121,76 Sb Antimon	52 127,60 Te Tellur	53 126,90 I Iod	54 131,29 Xe Xenon					
6	55 132,91 Cs Cäsium	56 137,33 Ba Barium	* Lanthanoide	72 178,49 Hf Hafnium	73 180,95 Ta Tantal	74 183,84 W Wolfram	75 186,21 Re Rhenium	76 190,23 Os Osmium	77 192,22 Ir Iridium	78 195,08 Pt Platin	79 196,97 Au Gold	80 200,59 Hg Quecksilber	81 204,38 Tl Thallium	82 207,2 Pb Blei	83 208,98 Bi Bismut	84 (209) Po Polonium	85 (210) At Astat	86 (222) Rn Radon					
7	87 (223) Fr Francium	88 (226) Ra Radium	** Actinoide	104 (267) Rf Rutherfordium	105 (268) Db Dubnium	106 (271) Sg Seaborgium	107 (270) Bh Bohrium	108 (277) Hs Hassium	109 (276) Mt Meitnerium	110 (281) Ds Darmstadtium	111 (280) Rg Röntgenium	112 (285) Cn Copernicium	113 (287) Uut Ununtrium	114 (289) Uuq Ununquadium	115 (288) Uup Ununpentium	116 (289) Uuh Ununhexium	117 (291) Uus Ununseptium	118 (293) Uuo Ununoctium					
		* Lanthanoide																					
		** Actinoide																					

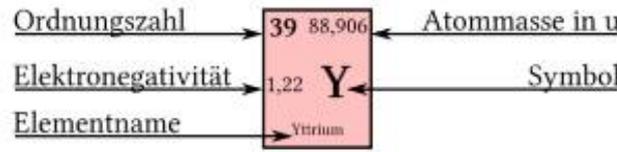


Fig. 1.10

Termschemata der Alkaliatome im Vergleich mit Wasserstoff

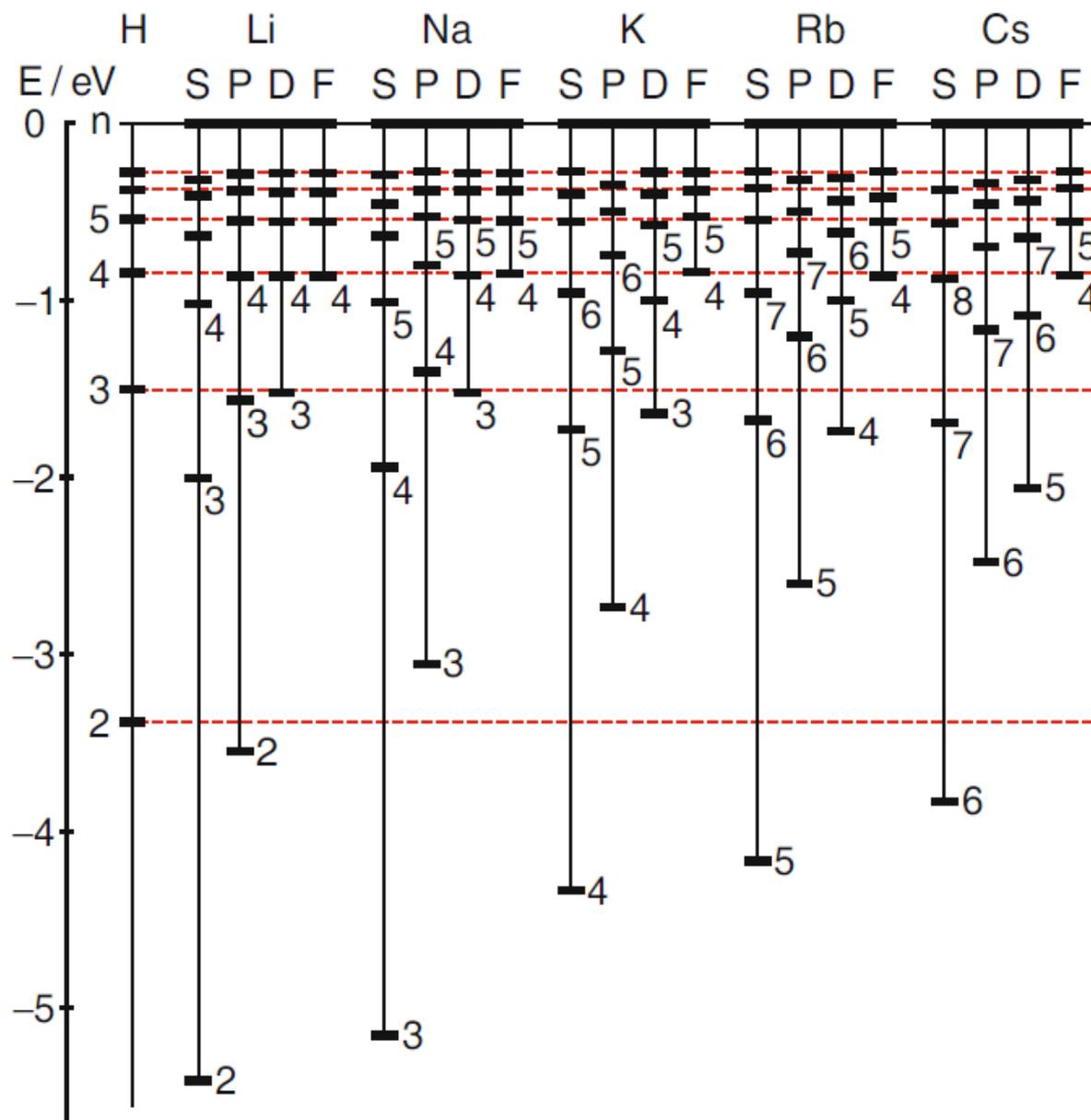
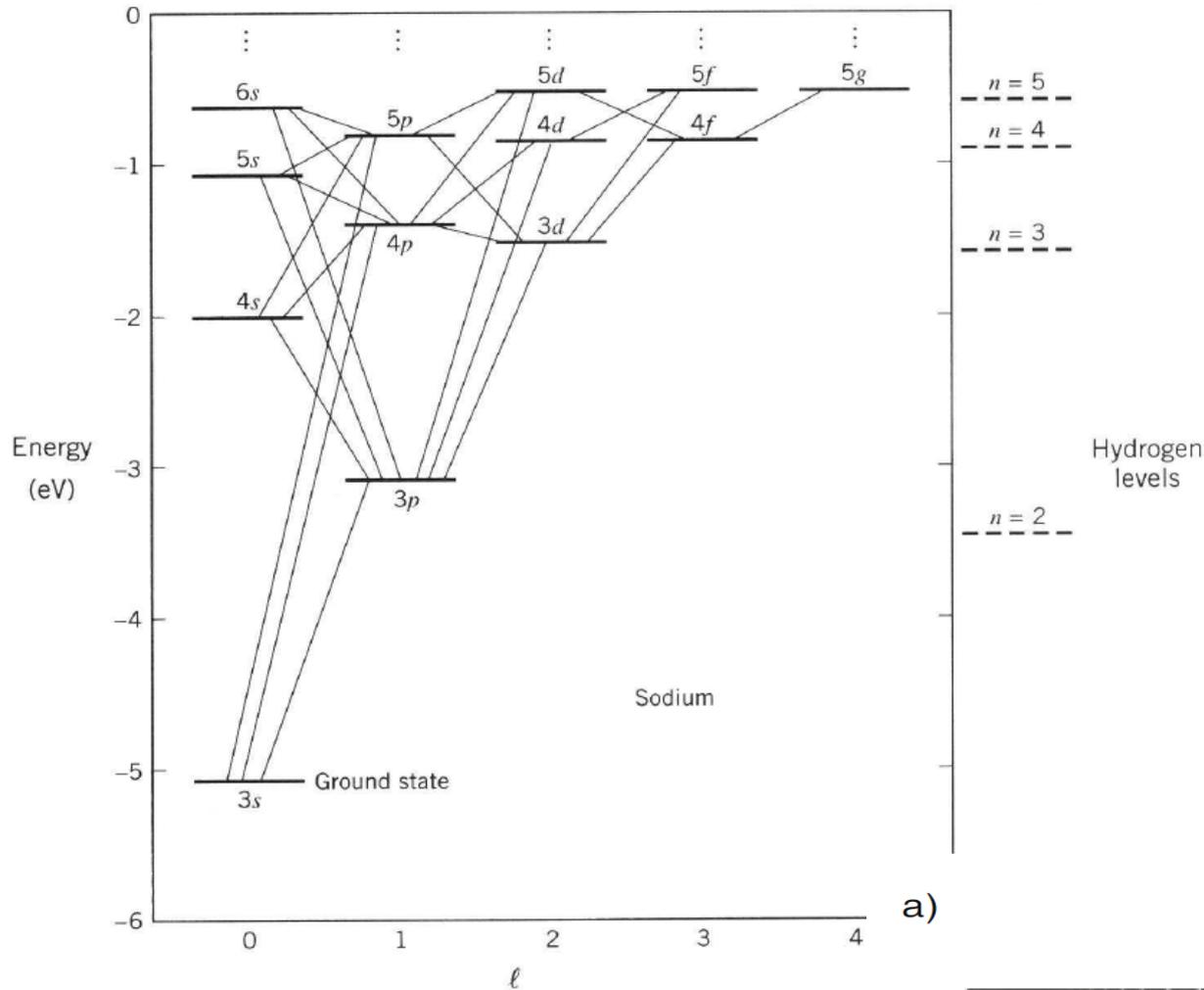


Fig. 1.11

Energieniveaus in Natrium



zusätzlich:
Feinstrukturaufspaltung in
 $j = l \pm \frac{1}{2}$ Subniveaus
für $l > 0$

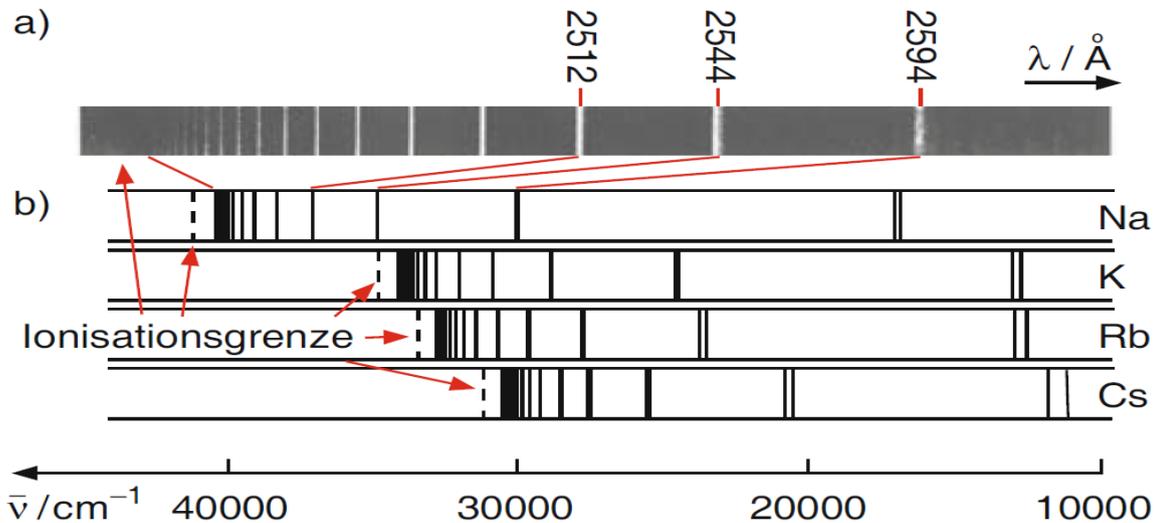


Fig. 1.12

Energieniveaus in Kohlenstoff

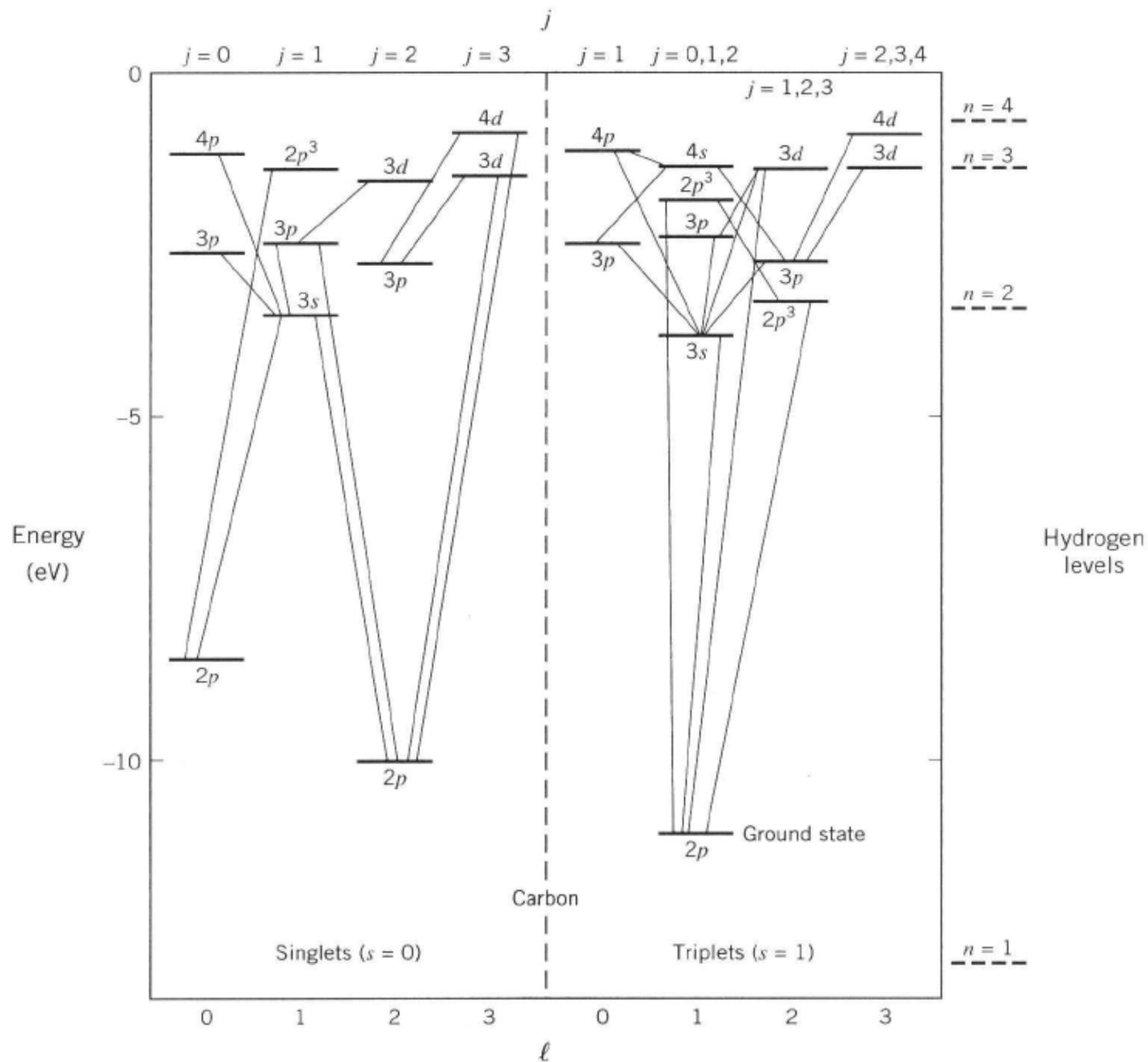


Fig. 1.13

Zunahme der LS Kopplungsstärke mit zunehmender Kernladung

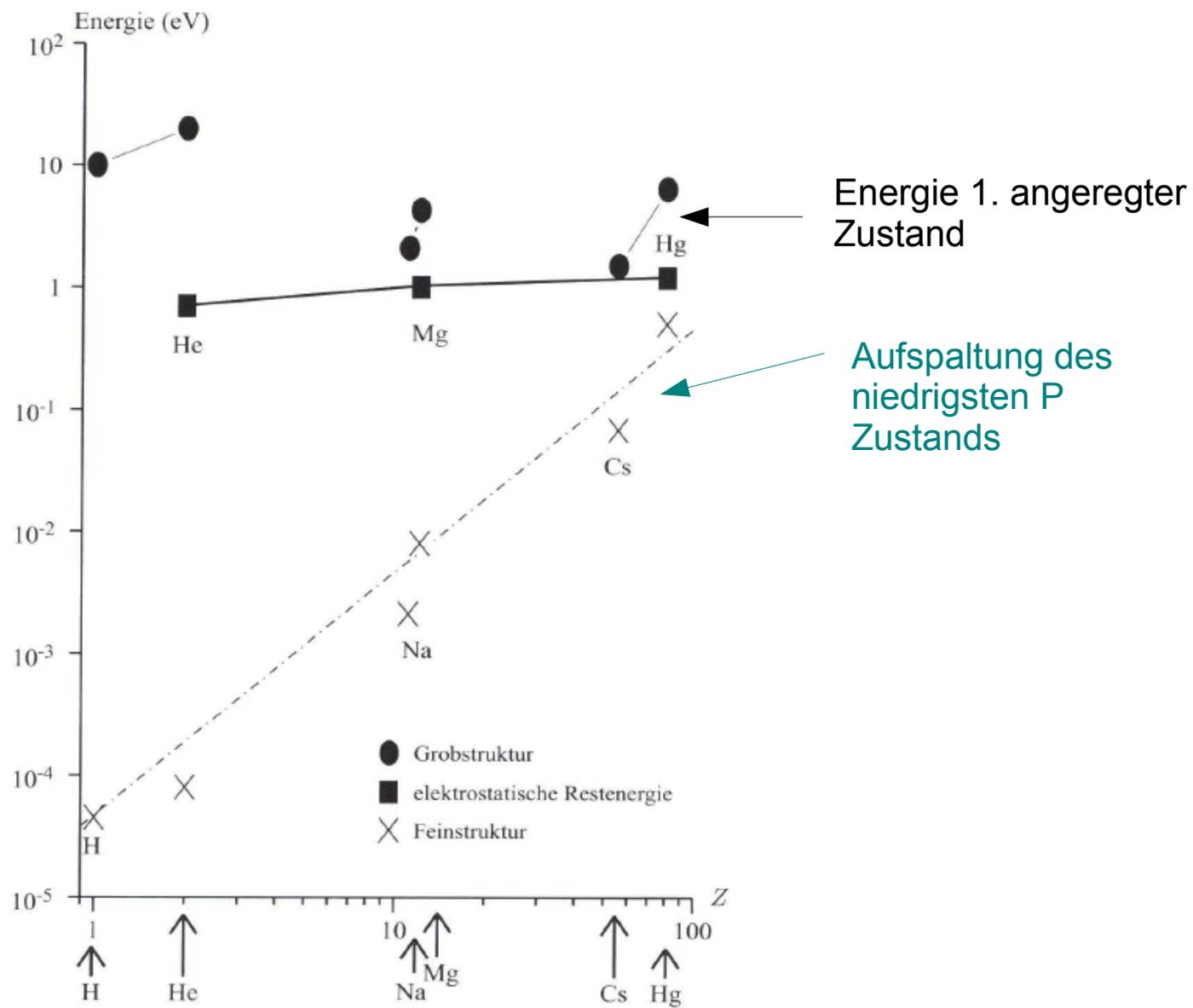


Fig. 1.14

Übergang LS- zu jj-Kopplung

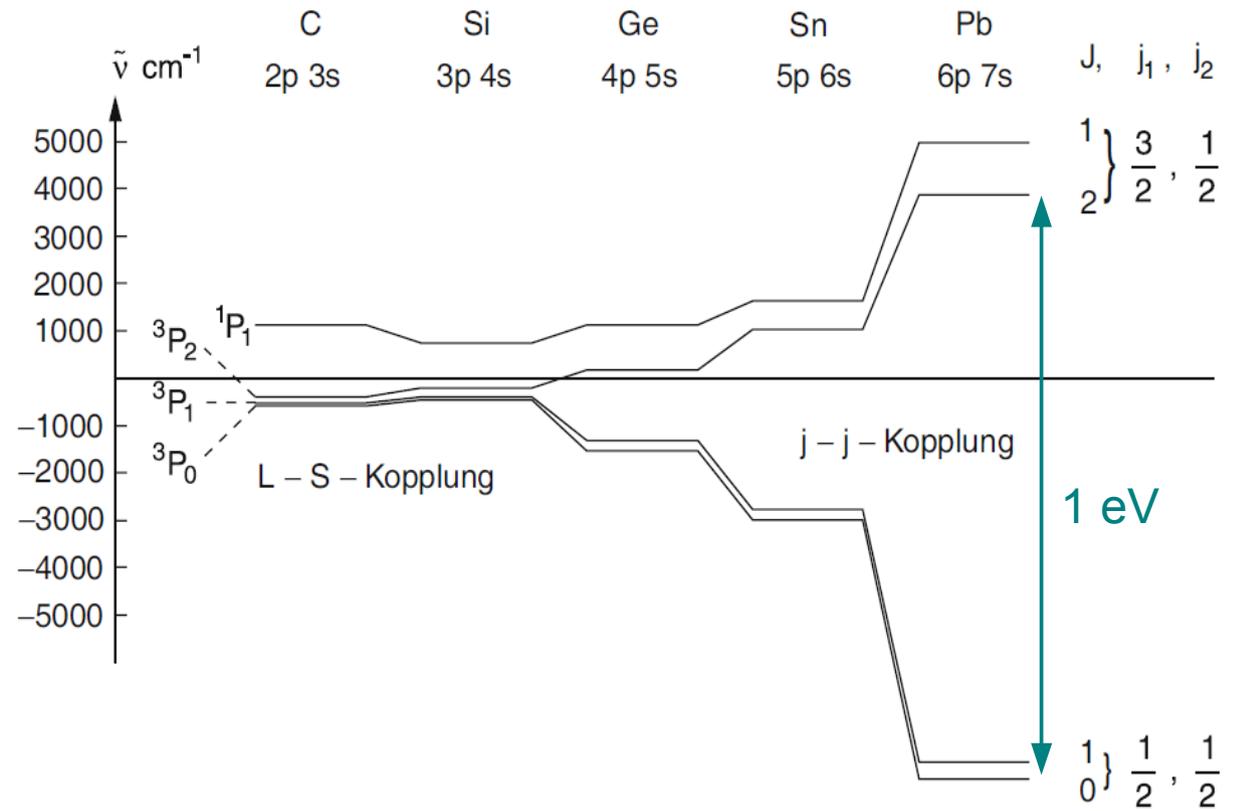
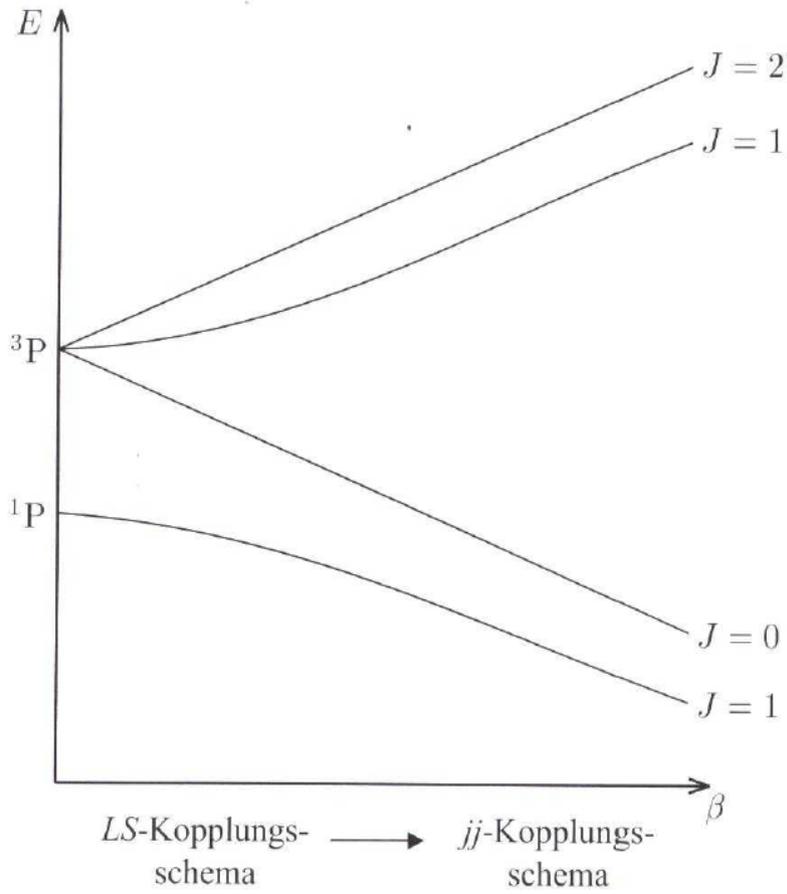


Fig. 1.15