Most Intense/Most Used XPS Core Lines

(Al Kα source at 1486.7 eV)

Legend example:
22 **Ti** 2p3/2 454 — Element / Most Intense/Most Used Core Line / Nominal Binding Energy in eV

1 **H** N.D.																	2 **He** N.D.
3 **Li** 1s 56	4 **Be** 1s 112											5 **B** 1s 189	6 **C** 1s 285	7 **N** 1s 398	8 **O** 1s 531	9 **F** 1s 685	10 **Ne** 1s 863
11 **Na** 1s 1072	12 **Mg** 2p 50											13 **Al** 2p 73	14 **Si** 2p 99	15 **P** 2p3/2 130	16 **S** 2p3/2 164	17 **Cl** 2p3/2 199	18 **Ar** 2p3/2 242
19 **K** 2p3/2 294	20 **Ca** 2p3/2 347	21 **Sc** 2p3/2 399	22 **Ti** 2p3/2 454	23 **V** 2p3/2 512	24 **Cr** 2p3/2 574	25 **Mn** 2p3/2 639	26 **Fe** 2p3/2 707	27 **Co** 2p3/2 778	28 **Ni** 2p3/2 853	29 **Cu** 2p3/2 933	30 **Zn** 2p3/2 1022	31 **Ga** 2p3/2[a] 1117	32 **Ge** 3d 29	33 **As** 3d5/2 42	34 **Se** 3d5/2 57	35 **Br** 3d5/2 69	36 **Kr** 3d5/2 87
37 **Rb** 3d5/2 111	38 **Sr** 3d5/2 134	39 **Y** 3d5/2 158	40 **Zr** 3d5/2 179	41 **Nb** 3d5/2 202	42 **Mo** 3d5/2 228	43 **Tc**	44 **Ru** 3d5/2 280	45 **Rh** 3d5/2 307	46 **Pd** 3d5/2 355	47 **Ag** 3d5/2 368	48 **Cd** 3d5/2 405	49 **In** 3d5/2 444	50 **Sn** 3d5/2 485	51 **Sb** 3d5/2 528	52 **Te** 3d5/2 573	53 **I** 3d5/2 619	54 **Xe** 3d5/2 670
55 **Cs** 3d5/2 726	56 **Ba** 3d5/2 781		72 **Hf** 4f7/2 14	73 **Ta** 4f7/2 22	74 **W** 4f7/2 31	74 **Re** 4f7/2 40	76 **Os** 4f7/2 51	77 **Ir** 4f7/2 61	78 **Pt** 4f7/2 71	79 **Au** 4f7/2 84	80 **Hg** 4f7/2 101	81 **Tl** 4f7/2 118	82 **Pb** 4f7/2 137	83 **Bi** 4f7/2 157	84 **Po**	85 **At**	86 **Rn**
87 **Fr** francium	88 **Ra** radium																

57 **La** 3d5/2 836	58 **Ce** 3d5/2 884	59 **Pr** 3d5/2 932	60 **Nd** 3d5/2 981	61 **Pm** 3d5/2 1033	62 **Sm** 3d5/2 1081	63 **Eu** 3d5/2[b] 1126	64 **Gd** 4d[c] 140	65 **Tb** 4d[d] 146	66 **Dy** 4d[e] 152	67 **Ho** 4d 160	68 **Er** 4d 167	69 **Tm** 4d 175	70 **Yb** 4d 182	71 **Lu** 4f7/2 7
89 **Ac** 4f7/2 307	90 **Th** 4f7/2 333	91 **Pa** 4f7/2 358	92 **U** 4f7/2 377	93 **Np** 4f7/2 403	94 **Pu** 4f7/2 425	95 **Am** 4f7/2 448	96 **Cm** 4f7/2 472	97 **Bk** 4f7/2 499	98 **Cf** 4f7/2 523	99 **Es** 4f7/2 550	100 **Fm**	101 **Md**	102 **No**	103 **Lr**

Legend:
- Non metals
- Transition Metals
- Metalloids
- Halogens
- Alkaline Earth
- Rare Earth
- Main Group Metals
- Noble Gasses
- Alkali Metals
- Lanthanides
- Actinides

Also Used
a) 3d 19 eV
b) 4d 128 eV
c) 3d5/2 1186 eV
d) 3d5/2 1241 eV
e) 3d5/2 1296 eV

M.C Biesinger 2016