# ELECTRON AFFINITIES

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Electron affinity is defined as the energy difference between the lowest (ground) state of the neutral and the lowest state of the corresponding negative ion. The accuracy of electron affinity measurements has been greatly improved since the advent of laser photodetachment experiments with negative ions. Electron affinities can be determined with optical precision, though a detailed understanding of atomic and molecular states and splittings is required to specify the photodetachment threshold corresponding to the electron affinity.

Atomic and molecular electron affinities are discussed in two excellent articles reviewing photodetachment studies which appear in *Gas Phase Ion Chemistry,* Vol. 3, Bowers, M. T., Ed., Academic Press, Orlando, 1984: Chapter 21 by Drzaic, P. S., Marks, J., and Brauman, J. I., "Electron Photodetachment from Gas Phase Negative Ions," p. 167, and Chapter 22 by Mead, R. D., Stevens, A. E., and Lineberger, W. C., "Photodetachment in Negative Ion Beams," p. 213. Persons interested in photodetachment details should consult these articles and the critical review**s** of Andersen, T., Haugen, H. K., and Hotop, H., *J. Phys. Chem. Ref. Data*, 28, 1511, 1999, Hotop, H. and Lineberger, W. C., *J. Phys. Chem. Ref. Data*, 14, 731, 1985, and Andersen, T., Haugen, H. K., and Hotop, H., *J. Phys. Chem. Ref. Data* 28, 1511, 1999. For simplicity in the tables below, any electron affinity which was discussed in the articles by Drzaic et al. or Hotop and Lineberger is referenced to these sources, where original references are given. The development of cluster-ion photodetachment apparatuses has brought an explosion of electron affinity estimates for atomic and molecular clusters. The policy in this tabulation is to list the electron affinities for the atoms, diatoms, and triatoms, if adiabatic electron affinities have been determined, but to refer the reader to original sources for higher-order clusters. Additional data on molecular electron affinities may be found in Lias, S. G., Bartmess, J. E., Liebman, J. F., Holmes, J. L., Levin, R. D., and Mallard, W. G., *Gas Phase Ion and Neutral Thermochemistry*, *J. Phys. Chem. Ref. Data*, 17, (Supplement No. 1), 1988 and on the NIST WebBook at the Internet address http://webbook.nist.gov/.

For the present tabulation the 2002 CODATA value $e/hc$ = 8065.54445 ± 0.00069 $cm^{-1}$ $eV^{-1}$ (http://physics.nist.gov) has been used to convert electron affinities from the units used in spectroscopic work, $cm^{-1}$, into eV for these tables. The 86 ppb uncertainty in $e/hc$ is insignificant compared to uncertainties in the electron affinity measurements.

Abbreviations used in the tables: calc = calculated value; PT = photodetachment threshold using a lamp as a light source; LPT = laser photodetachment threshold; LPES = laser photoelectron spectroscopy; DA = dissociative attachment; attach = electron attachment/detachment equilibrium**;** e-scat = electron scattering; kinetic = dissociation kinetics; Knud=Knudsen cell; CT = charge transfer; CD = collisional detachment; and ZEKE = zero electron kinetic energy spectroscopy.

**TABLE 1. Atomic Electron Affinities**

| Atomic number | Atom | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|---|
| 1 | H | 0.754195 | 0.000019 | LPT | 89 | |
| | | 0.75420812 | - | calc | 205 | |
| | D | 0.754593 | 0.000074 | LPT | 89 | deuterium |
| | D | 0.75465624 | - | calc | 205 | deuterium |
| | T | 0.75480540 | - | calc | 205 | tritium |
| 2 | He | not stable | - | calc | 1 | |
| 3 | Li | 0.618049 | 0.000020 | LPT | 185 | |
| 4 | Be | not stable | - | calc | 1 | |
| 5 | B | 0.279723 | 0.000025 | LPES | 191 | |
| 6 | C | 1.262119 | 0.000020 | LPT | 28 | |
| 7 | N | not stable | - | DA | 1 | |
| 8 | O | 1.4611096 | 0.0000007 | LPT | 4 | |
| 9 | F | 3.4011895 | 0.0000025 | LPT | 227 | |
| 10 | Ne | not stable | - | calc | 1 | |
| 11 | Na | 0.547926 | 0.000025 | LPT | 1 | |
| 12 | Mg | not stable | - | e-scat | 1 | |
| 13 | Al | 0.43283 | 0.00005 | LPES | 208 | |
| 14 | Si | 1.3895220 | 0.0000024 | LPES | 227 | |
| 15 | P | 0.7465 | 0.0003 | LPT | 1 | |
| 16 | S | 2.077103 | 0.000001 | LPT | 1 | |
| 17 | Cl | 3.612724 | 0.000027 | LPT | 52 | |
| 18 | Ar | not stable | - | calc | 1 | |
| 19 | K | 0.50147 | 0.00010 | LPT | 1 | |
| 20 | Ca | 0.02455 | 0.00010 | LPT | 44 | |
| 21 | Sc | 0.188 | 0.020 | LPES | 1 | |
| 22 | Ti | 0.079 | 0.014 | LPES | 1 | |
| 23 | V | 0.525 | 0.012 | LPES | 1 | |
| 24 | Cr | 0.666 | 0.012 | LPES | 1 | |

| Atomic number | Atom | Electron affinity in eV | Uncertainty in eV | Method | Ref. |
|---|---|---|---|---|---|
| 25 | Mn | not stable | - | calc | 1 |
| 26 | Fe | 0.151 | 0.003 | LPES | 27 |
| 27 | Co | 0.662 | 0.003 | LPES | 27 |
| 28 | Ni | 1.156 | 0.010 | LPES | 1 |
| 29 | Cu | 1.235 | 0.005 | LPES | 37 |
| 30 | Zn | not stable | - | e-scat | 1 |
| 31 | Ga | 0.43 | 0.03 | LPES | 183 |
| 32 | Ge | 1.232712 | 0.000015 | LPES | 28 |
| 33 | As | 0.814 | 0.008 | LPES | 200 |
| 34 | Se | 2.020670 | 0.000025 | LPT | 1 |
| 35 | Br | 3.363588 | 0.000002 | LPT | 74 |
| 36 | Kr | not stable | - | calc | 1 |
| 37 | Rb | 0.48592 | 0.00002 | LPT | 1 |
| 38 | Sr | 0.048 | 0.006 | LPT | 122 |
| 39 | Y | 0.307 | 0.012 | LPES | 1 |
| 40 | Zr | 0.426 | 0.014 | LPES | 1 |
| 41 | Nb | 0.893 | 0.025 | LPES | 1 |
| 42 | Mo | 0.748 | 0.002 | LPES | 127 |
| 43 | Tc | 0.55 | 0.20 | calc | 1 |
| 44 | Ru | 1.05 | 0.15 | calc | 1 |
| 45 | Rh | 1.137 | 0.008 | LPES | 1 |
| 46 | Pd | 0.562 | 0.005 | LPES | 116 |
| 47 | Ag | 1.302 | 0.007 | LPES | 1 |
| 48 | Cd | not stable | - | e-scat | 1 |
| 49 | In | 0.3 | 0.2 | PT | 1 |
| 50 | Sn | 1.112067 | 0.000015 | LPES | 28 |
| 51 | Sb | 1.046 | 0.005 | LPES | 108 |
| 52 | Te | 1.970876 | 0.000007 | LPT | 261 |
| 53 | I | 3.059037 | 0.000010 | LPT | 92 |
| 54 | Xe | not stable | - | calc | 1 |
| 55 | Cs | 0.471626 | 0.000025 | LPT | 1 |
| 56 | Ba | 0.14462 | 0.00006 | LPT | 195 |
| 57 | La | 0.47 | 0.02 | LPT | 184 |
| 58 | Ce | 0.955 | 0.026 | LPES | 269 |
| 59 | Pr | 0.962 | 0.024 | LPES | 225 |
| 63 | Eu | 0.864 | 0.024 | LPES | 268 |
| 69 | Tm | 1.029 | 0.022 | LPES | 264 |
| 70 | Yb | -0.020 | - | calc | 196 |
| 71 | Lu | 0.34 | 0.01 | LPT | 223 |
| 72 | Hf | »0 | - | calc | 1 |
| 73 | Ta | 0.322 | 0.012 | LPES | 1 |
| 74 | W | 0.815 | 0.002 | LPES | 37 |
| 75 | Re | 0.15 | 0.15 | calc | 1 |
| 76 | Os | 1.1 | 0.2 | calc | 1 |
| 77 | Ir | 1.5638 | 0.0005 | LPT | 141 |
| 78 | Pt | 2.128 | 0.002 | LPT | 1 |
| 79 | Au | 2.30863 | 0.00003 | LPT | 1 |
| 80 | Hg | not stable | - | e-scat | 1 |
| 81 | Tl | 0.2 | 0.2 | PT | 1 |
| 82 | Pb | 0.364 | 0.008 | LPES | 1 |
| 83 | Bi | 0.942362 | 0.000013 | LPT | 262 |
| 84 | Po | 1.9 | 0.3 | calc | 1 |
| 85 | At | 2.8 | 0.2 | calc | 1 |
| 86 | Rn | not stable | - | calc | 1 |
| 87 | Fr | 0.46 | - | calc | 82 |
| 88 | Ra | 0.10 | - | calc | 273 |
| 89 | Ac | 0.35 | - | calc | 207 |
| 118 | ekaradon | 0.056 | 0.01 | calc | 140 |
| 121 | ekaactinium | 0.57 | - | calc | 207 |

**TABLE 2. Electron Affinities for Diatomic Molecules**

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. |
|---|---|---|---|---|
| $Ag_2$ | 1.023 | 0.007 | LPES | 37 |
| AgO | 1.654 | 0.002 | LPES | 233 |
| $Al_2$ | 1.10 | 0.15 | LPES | 68 |
| AlO | 2.60 | 0.02 | LPES | 143 |
| AlP | 2.043 | 0.020 | LPES | 218 |
| AlS | 2.60 | 0.03 | LPES | 129 |
| $As_2$ | 0.739 | 0.008 | LPES | 200 |
| AsH | 1.0 | 0.1 | PT | 2 |
| AsO | 1.286 | 0.008 | LPES | 198 |
| $Au_2$ | 1.938 | 0.007 | LPES | 37 |
| AuO | 2.374 | 0.007 | LPES | 282 |
| AuPd | 1.88 | — | LPES | 220 |
| AuS | 2.469 | 0.006 | LPES | 282 |
| BN | 3.160 | 0.005 | LPES | 189 |
| BO | 2.508 | 0.008 | LPES | 6 |
| BeH | 0.7 | 0.1 | PT | 2 |
| $Bi_2$ | 1.271 | 0.008 | LPES | 119 |
| $Br_2$ | 2.55 | 0.10 | CT | 2 |
| BrO | 2.353 | 0.006 | LPES | 88 |
| $C_2$ | 3.269 | 0.006 | LPES | 87 |
| CH | 1.238 | 0.008 | LPES | 2 |
| CN | 3.862 | 0.004 | LPES | 111 |
| CRh | 1.46 | 0.02 | LPES | 206 |
| CS | 0.205 | 0.021 | LPES | 2 |
| CaH | 0.93 | 0.05 | PT | 2 |
| $Cl_2$ | 2.38 | 0.10 | CT | 2 |
| ClO | 2.275 | 0.006 | LPES | 88 |
| $Co_2$ | 1.110 | 0.008 | LPES | 27 |
| CoD | 0.680 | 0.010 | LPES | 29 |
| CoH | 0.671 | 0.010 | LPES | 29 |
| $Cr_2$ | 0.505 | 0.005 | LPES | 114 |
| CrD | 0.568 | 0.010 | LPES | 29 |
| CrH | 0.563 | 0.010 | LPES | 29 |
| CrO | 1.221 | 0.006 | LPES | 5 |
| $Cs_2$ | 0.469 | 0.015 | LPES | 104 |
| CsCl | 0.455 | 0.010 | LPES | 30 |
| CsO | 0.273 | 0.012 | LPES | 133 |
| $Cu_2$ | 0.836 | 0.006 | LPES | 37 |
| CuO | 1.777 | 0.006 | LPES | 118 |
| $F_2$ | 3.08 | 0.10 | CT | 2 |
| FO | 2.272 | 0.006 | LPES | 88 |
| $Fe_2$ | 0.902 | 0.008 | LPES | 27 |
| FeD | 0.932 | 0.015 | LPES | 9 |
| FeH | 0.934 | 0.011 | LPES | 9 |
| FeO | 1.493 | 0.005 | LPES | 45 |
| GaAs | 1.949 | 0.020 | LPES | 218 |
| GaO | 2.612 | 0.008 | LPES | 279 |
| GaP | 1.988 | 0.020 | LPES | 218 |
| $Ge_2$ | 2.035 | 0.001 | LPES | 123 |
| $I_2$ | 2.55 | 0.05 | CT | 2 |
| IBr | 2.55 | 0.10 | CT | 2 |
| IO | 2.378 | 0.006 | LPES | 88 |
| InP | 1.845 | 0.020 | LPES | 218 |
| $K_2$ | 0.497 | 0.012 | LPES | 104 |
| KBr | 0.642 | 0.010 | LPES | 30 |
| KCl | 0.582 | 0.010 | LPES | 30 |
| KCs | 0.471 | 0.020 | LPES | 104 |
| KI | 0.728 | 0.010 | LPES | 30 |
| KRb | 0.486 | 0.020 | LPES | 104 |
| LiCl | 0.593 | 0.010 | LPES | 30 |
| LiD | 0.337 | 0.012 | LPES | 102 |
| LiH | 0.342 | 0.012 | LPES | 102 |
| MgCl | 1.589 | 0.011 | LPES | 31 |
| MgH | 1.05 | 0.06 | PT | 2 |
| MgI | 1.899 | 0.018 | LPES | 31 |
| MgO | 1.630 | 0.025 | LPES | 178 |
| MnD | 0.866 | 0.010 | LPES | 9 |
| MnH | 0.869 | 0.010 | LPES | 9 |
| MnO | 1.375 | 0.010 | LPES | 158 |
| MoO | 1.290 | 0.006 | LPES | 127 |
| NH | 0.370 | 0.004 | LPT | 32 |
| NO | 0.026 | 0.005 | LPES | 73 |
| NRh | 1.51 | 0.02 | LPES | 206 |
| NS | 1.194 | 0.011 | LPES | 2 |
| $Na_2$ | 0.430 | 0.015 | LPES | 104 |
| NaBr | 0.788 | 0.010 | LPES | 30 |
| NaCl | 0.727 | 0.010 | LPES | 30 |
| NaF | 0.520 | 0.010 | LPES | 30 |
| NaI | 0.865 | 0.010 | LPES | 30 |
| NaK | 0.465 | 0.030 | LPES | 104 |
| NbO | 1.29 | 0.02 | LPES | 174 |
| $Ni_2$ | 0.926 | 0.010 | LPES | 112 |
| NiCu | 0.889 | 0.010 | LPES | 128 |
| NiAg | 0.979 | 0.010 | LPES | 128 |
| NiD | 0.477 | 0.007 | LPES | 29 |
| NiH | 0.481 | 0.007 | LPES | 29 |
| NiO | 1.470 | 0.003 | LPES | 146 |
| $O_2$ | 0.450 | 0.002 | LPES | 222 |
| OD | 1.825533 | 0.000037 | LPT | 142 |
| OH | 1.8276487 | 0.000011 | LPT | 226 |
| ORh | 1.58 | 0.02 | LPES | 206 |
| $P_2$ | 0.589 | 0.025 | LPES | 42 |
| PH | 1.027 | 0.006 | LPES | 281 |
| PO | 1.092 | 0.010 | LPES | 2 |
| $Pb_2$ | 1.366 | 0.010 | LPES | 117 |
| PbO | 0.722 | 0.006 | LPES | 105 |
| PbS | 1.049 | 0.010 | LPES | 228 |
| $Pd_2$ | 1.685 | 0.008 | LPES | 112 |
| PdCO | 0.604 | 0.010 | LPES | 160 |
| PdO | 1.570 | 0.006 | LPES | 290 |
| $Pt_2$ | 1.898 | 0.008 | LPES | 112 |
| PtN | 1.240 | 0.010 | LPES | 46 |
| $Rb_2$ | 0.498 | 0.015 | LPES | 104 |
| RbCl | 0.544 | 0.010 | LPES | 30 |
| RbCs | 0.478 | 0.020 | LPES | 104 |
| $Re_2$ | 1.571 | 0.008 | LPES | 33 |
| $S_2$ | 1.670 | 0.015 | LPES | 53 |
| SD | 2.315 | 0.002 | LPES | 10 |
| SF | 2.285 | 0.006 | LPES | 93 |
| SH | 2.314343 | 0.000004 | LPT | 47 |
| SO | 1.125 | 0.005 | LPES | 84 |
| $Sb_2$ | 1.282 | 0.008 | LPES | 108 |
| ScO | 1.35 | 0.02 | LPES | 171 |
| $Se_2$ | 1.94 | 0.07 | LPES | 38 |
| SeH | 2.212519 | 0.000025 | LPT | 48 |
| SeO | 1.456 | 0.020 | LPES | 41 |
| $Si_2$ | 2.201 | 0.010 | LPES | 100 |
| SiF | 0.81 | 0.02 | LPES | 278 |
| SiH | 1.277 | 0.009 | LPES | 2 |
| SiN | 2.949 | 0.008 | LPES | 274 |
| $Sn_2$ | 1.962 | 0.010 | LPES | 117 |
| SnO | 0.598 | 0.006 | LPES | 168 |
| SnPb | 1.569 | 0.008 | LPES | 117 |
| $Te_2$ | 1.92 | 0.07 | LPES | 38 |
| TeH | 2.102 | 0.015 | LPES | 39 |
| TeO | 1.697 | 0.022 | LPES | 40 |
| TiO | 1.30 | 0.03 | LPES | 172 |
| VO | 1.229 | 0.008 | LPES | 170 |
| YO | 1.35 | 0.02 | LPES | 171 |
| ZnF | 1.974 | 0.008 | LPES | 179 |
| ZnH | <0.95 | — | PT | 2 |
| ZnO | 2.087 | 0.008 | LPES | 179 |
| ZrO | 1.3 | 0.3 | LPES | 173 |

**TABLE 3. Electron Affinities for Triatomic Molecules**

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|
| $Ag_3$ | 2.32 | 0.05 | LPES | 37 | |
| AgCN | 1.588 | 0.010 | LPES | 163 | |
| $Al_3$ | 1.4 | 0.15 | LPES | 68 | |
| $AlO_2$ | 4.23 | 0.02 | LPES | 143 | |
| $AlP_2$ | 1.933 | 0.007 | LPES | 217 | |
| $Al_2P$ | 2.513 | 0.020 | LPES | 217 | |
| $Al_2S$ | 0.80 | 0.12 | LPES | 129 | |
| $As_3$ | 1.45 | 0.03 | LPES | 200 | |
| $AsH_2$ | 1.27 | 0.03 | PT | 2 | |
| $Au_3$ | 3.7 | 0.3 | LPES | 37 | |
| $AuBr_2$ | 4.46 | 0.07 | LPES | 294 | |
| $AuCl_2$ | 4.60 | 0.07 | LPES | 294 | |
| $AuI_2$ | 4.18 | 0.07 | LPES | 294 | |
| $Au_2H$ | 3.55 | 0.03 | LPES | 276 | |
| $Au_2Pd$ | 3.80 | — | LPES | 220 | |
| $BO_2$ | 4.3 | 0.2 | CT | 98 | |
| $B_2N$ | 3.098 | 0.005 | LPES | 193 | |
| $B_3$ | 2.82 | 0.02 | LPES | 221 | |
| $Bi_3$ | 1.60 | 0.03 | LPES | 119 | |
| $C_3$ | 1.981 | 0.020 | LPES | 11 | |
| $CBr_2$ | 1.88 | 0.07 | LPES | 235 | |
| $CCl_2$ | 1.59 | 0.07 | LPES | 235 | |
| $CD_2$ | 0.645 | 0.006 | LPES | 12 | |
| CDF | 0.535 | 0.005 | LPES | 95 | |
| $CF_2$ | 0.180 | 0.020 | LPES | 235 | |
| $CH_2$ | 0.652 | 0.006 | LPES | 12 | |
| CHBr | 1.454 | 0.005 | LPES | 95 | |
| CHCl | 1.210 | 0.005 | LPES | 95 | |
| CHF | 0.542 | 0.005 | LPES | 95 | |
| CHI | 1.42 | 0.17 | LPES | 95 | |
| $CI_2$ | 2.09 | 0.07 | LPES | 235 | |
| $C_2Cr$ | 2.30 | 1.617 | 0.015 | 271 | |
| $C_2H$ | 2.969 | 0.006 | LPES | 87 | |
| $C_2Nb$ | 1.380 | 0.025 | LPES | 243 | |
| $C_2O$ | 2.289 | 0.018 | LPES | 180 | |
| COS | -0.04 | — | LPES | 272 | |
| $CS_2$ | 0.58 | 0.05 | LPES | 278 | |
| $C_2Ti$ | 1.542 | 0.020 | LPES | 147 | |
| $CoD_2$ | 1.465 | 0.013 | LPES | 34 | |
| $CoH_2$ | 1.450 | 0.014 | LPES | 34 | |
| $CrH_2$ | >2.5 | — | LPES | 34 | |
| $Cr_2D$ | 1.464 | 0.005 | LPES | 107 | |
| $Cr_2H$ | 1.474 | 0.005 | LPES | 107 | |
| $CrO_2$ | 2.413 | 0.008 | LPES | 144 | OCrO |
| $CrO_2$ | 1.5 | 0.06 | LPES | 241 | $Cr(O_2)$ |
| $Cs_3$ | 0.864 | 0.030 | LPES | 18 | |
| $Cu_3$ | 2.11 | 0.05 | LPES | 37 | |
| CuCN | 1.466 | 0.010 | LPES | 163 | |
| $CuCl_2$ | 4.35 | 0.05 | LPES | 177 | |
| $CuBr_2$ | 4.35 | 0.05 | LPES | 177 | |
| DCO | 0.301 | 0.005 | LPES | 35 | |
| DNO | 0.330 | 0.015 | LPES | 14 | |
| $DO_2$ | 1.077 | 0.005 | LPES | 15 | |
| $DS_2$ | 1.912 | 0.015 | LPES | 53 | |
| $Fe_3$ | 1.43 | 0.06 | LPES | 149 | |
| $FeC_2$ | 1.9782 | 0.0006 | LPES | 254 | |
| FeCO | 1.157 | 0.005 | LPES | 103 | |
| $FeD_2$ | 1.038 | 0.013 | LPES | 34 | |
| $FeH_2$ | 1.049 | 0.014 | LPES | 34 | |
| $FeO_2$ | 2.358 | 0.030 | LPES | 130 | |
| $Fe_2H$ | 0.564 | 0.019 | LPES | 254 | |
| $Fe_2O$ | 1.60 | 0.02 | LPES | 152 | |
| $GaAs_2$ | 1.894 | 0.033 | LPES | 192 | |
| $GaP_2$ | 1.666 | 0.041 | LPES | 192 | |
| $Ga_2As$ | 2.428 | 0.020 | LPES | 192 | |
| $Ga_2P$ | 2.481 | 0.015 | LPES | 192 | |
| $Ge_3$ | 2.23 | 0.01 | LPES | 123 | |
| $GeH_2$ | 1.097 | 0.015 | LPES | 28 | |
| HCO | 0.313 | 0.005 | LPES | 35 | |
| $HCl_2$ | 4.896 | 0.005 | LPES | 69 | |
| HNO | 0.338 | 0.015 | LPES | 14 | |
| $HO_2$ | 1.078 | 0.006 | LPES | 15 | |
| $HS_2$ | 1.907 | 0.015 | LPES | 53 | |
| $I_3$ | 4.226 | 0.013 | LPES | 162 | |
| $InP_2$ | 1.61 | 0.05 | LPES | 137 | |
| $In_2P$ | 2.36 | 0.05 | LPES | 137 | |
| $K_3$ | 0.956 | 0.050 | LPES | 18 | |
| $MnD_2$ | 0.465 | 0.014 | LPES | 34 | |
| $MnH_2$ | 0.444 | 0.016 | LPES | 34 | |
| $MnO_2$ | 2.06 | 0.03 | LPES | 158 | |
| $N_3$ | 2.70 | 0.12 | PT | 2 | |
| $N_3$ | 2.68 | 0.01 | LPT | 255 | |
| NCN | 2.484 | 0.006 | LPES | 154 | |
| NCO | 3.609 | 0.005 | LPES | 111 | |
| NCS | 3.537 | 0.005 | LPES | 111 | |
| $NH_2$ | 0.771 | 0.005 | LPES | 58 | |
| $N_2O$ | -0.03 | 0.10 | calc | 59 | |
| $NO_2$ | 2.273 | 0.005 | LPES | 63 | |
| (NO)R | R=Ar,Kr,Xe | — | LPES | 90 | |
| $Na_3$ | 1.019 | 0.060 | LPES | 18 | |
| $NaCS_2$ | 0.80 | 0.05 | LPES | 278 | |
| $Na_2CS_2$ | 0.25 | 0.05 | LPES | 278 | |
| $Nb_3$ | 1.032 | 0.010 | LPES | 175 | |
| $Ni_3$ | 1.41 | 0.05 | LPES | 55 | |
| NiCN | 1.771 | 0.010 | LPES | 287 | |
| NiCO | 0.804 | 0.012 | LPES | 2 | |
| $NiD_2$ | 1.926 | 0.007 | LPES | 34 | |
| $NiH_2$ | 1.934 | 0.008 | LPES | 34 | |
| $NiO_2$ | 3.05 | 0.01 | LPES | 214 | ONiO |
| $NiO_2$ | 0.82 | 0.03 | LPES | 214 | $Ni(O_2)$ |
| $O_3$ | 2.1028 | 0.0025 | LPT | 2 | |
| $O_2Ar$ | 0.52 | 0.02 | LPES | 75 | |
| OClO | 2.140 | 0.008 | LPES | 88 | |
| OIO | 2.577 | 0.008 | LPES | 88 | |
| $PH_2$ | 1.263 | 0.006 | LPES | 281 | |
| $P_2H$ | 1.514 | 0.010 | LPES | 281 | |
| $PO_2$ | 3.42 | 0.01 | LPES | 124 | |
| $Pd_3$ | <1.5 | 0.1 | LPES | 55 | |
| PdCN | 2.543 | 0.007 | LPES | 287 | |
| PdCO | 0.606 | 0.010 | LPES | 293 | |
| $Pt_3$ | 1.87 | 0.02 | LPES | 55 | |
| PtCN | 3.191 | 0.003 | LPES | 287 | |
| PtCO | 1.212 | 0.010 | LPES | 293 | |
| $Rb_3$ | 0.920 | 0.030 | LPES | 18 | |
| $ReO_2$ | 2.5 | 0.1 | LPES | 216 | |
| $S_3$ | 2.093 | 0.025 | LPES | 16 | |
| $SO_2$ | 1.107 | 0.008 | LPES | 16 | |
| $S_2O$ | 1.877 | 0.008 | LPES | 16 | |
| $Sb_3$ | 1.85 | 0.03 | LPES | 108 | |
| $SeO_2$ | 1.823 | 0.050 | LPES | 38 | |
| $SiF_2$ | 0.10 | 0.10 | LPES | 278 | |
| $Si_2F$ | 1.99 | 0.28 | LPES | 17 | |
| $SiH_2$ | 1.124 | 0.020 | LPES | 2 | |
| $Si_2H$ | 2.31 | 0.01 | LPES | 182 | |
| $Si_3$ | 2.29 | 0.02 | LPES | 110 | |
| $Sn_3$ | 2.24 | 0.01 | LPES | 289 | |
| SnCN | 1.922 | 0.006 | LPES | 292 | |
| $Ta_3$ | 1.36 | 0.03 | LPES | 169 | |
| $TiO_2$ | 1.59 | 0.03 | LPES | 172 | |
| $V_3$ | 1.107 | 0.010 | LPES | 176 | |
| $VO_2$ | 2.3 | 0.2 | CT | 101 | |
| $WO_2$ | 1.958 | 0.050 | LPES | 233 | |

**TABLE 4. Electron Affinities for Larger Polyatomic Molecules**

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|
| $Ag_n$ | $n$=1-60 | — | LPES | 37 | |
| $Al_n$ | $n$=3-32 | — | LPES | 68 | |
| $Al_5$ | 2.23 | 0.05 | LPES | 238 | |
| $Al_2C_2$ | 0.64 | 0.05 | LPES | 239 | acetylide |
| $Al_3C$ | 2.56 | 0.06 | LPES | 161 | |
| $Al_3C_2$ | 2.19 | 0.03 | LPES | 244 | |
| $Al_3Ge_2$ | 2.43 | 0.03 | LPES | 244 | |
| $Al_3Si_2$ | 2.36 | 0.03 | LPES | 244 | |
| $Al_3O$ | 1.00 | 0.15 | LPES | 68 | |
| $Al_5H_2O_5$ | 3.10 | 0.10 | LPES | 283 | |
| $Al_5O_4$ | 3.50 | 0.05 | LPES | 283 | |
| $Al_nO_m$ | $n$=1,2 | $m$=1-5 | LPES | 143 | |
| $Al_nO_m$ | $n$=3-7 | $m$=2-5 | LPES | 267 | |
| $Al_nP_m$ | $n$=1-4 | $m$=1-4 | LPES | 217 | |
| $Al_nS_m$ | $n$=1-5 | $m$=1-3 | LPES | 129 | |
| $Ar(H_2O)_n$ | $n$=2,6,7 | — | LPES | 77 | |
| $Ar_nBr$ | $n$=2-9 | — | ZEKE | 212 | |
| $Ar_nI$ | $n$=2-19 | — | ZEKE | 212 | |
| $As_4$ | <0.8 | — | LPES | 200 | |
| $As_5$ | ≈1.7 | — | LPES | 200 | |
| $As_5$ | ≈3.5 | — | LPES | 253 | |
| $Au_n$ | $n$=1-233 | — | LPES | 37 | |
| $AuF_6$ | 7.5 | estimate | CT | 98 | |
| $Au_3Pd$ | 2.51 | — | LPES | 220 | |
| $Au_4Pd$ | 2.69 | — | LPES | 220 | |
| $Au_6$ | 2.06 | 0.02 | LPES | 288 | |
| $Au_6(CO)$ | 2.04 | 0.05 | LPES | 288 | |
| $Au_6(CO)_2$ | 2.03 | 0.05 | LPES | 288 | |
| $Au_6(CO)_3$ | 1.95 | 0.05 | LPES | 288 | |
| $Au_{12}Nb$ | 3.70 | 0.03 | LPES | 275 | |
| $Au_{12}Ta$ | 3.77 | 0.03 | LPES | 275 | |
| $Au_{12}V$ | 3.76 | 0.03 | LPES | 275 | |
| $B_5$ | 2.33 | 0.02 | LPES | 245 | |
| $BD_3$ | 0.027 | 0.014 | LPES | 62 | |
| $BH_3$ | 0.038 | 0.015 | LPES | 62 | |
| $B_6Li$ | 2.3 | 0.1 | LPES | 298 | |
| $B_3N$ | 2.098 | 0.035 | LPES | 193 | |
| $Bi_n$ | $n$=2-9 | — | LPES | 213 | |
| $Bi_4$ | 1.05 | 0.010 | LPES | 119 | |
| $Bi_5$ | 2.87 | 0.02 | LPES | 253 | |
| $Br(CO_2)$ | 3.582 | 0.017 | LPES | 131 | |
| $Br(H_2O)_n$ | $n$=1-4 | — | LPES | 250 | |
| $C_n$ | $n$=2-84 | — | LPES | 70 | |
| $C_nCr$ | $n$=2-8 | — | LPES | 271 | |
| $C_nNb$ | $n$=2-7 | — | LPES | 243 | |
| $(CO_2)_n$ | $n$=1,2 | — | LPES | 75 | |
| $(CS)_n$ | $n$=2 | — | LPES | 75 | |
| $(CS_2)_n$ | $n$=1,2 | — | LPES | 75 | |
| $CAl_3Ge$ | 2.70 | 0.06 | LPES | 224 | |
| $CAl_3Si$ | 2.77 | 0.06 | LPES | 224 | |
| $CCl_4$ | ≤1.14 | — | CT | 266 | |
| $CCoNO_3$ | 1.73 | 0.03 | LPES | 199 | $Co(CO_2)NO$ |
| $CDO_2$ | 3.510 | 0.015 | LPES | 109 | |
| $CF_3$ | 1.82 | 0.05 | LPES | 187 | |
| $CF_3Br$ | 0.91 | 0.2 | CD | 2 | |
| $CF_3I$ | 1.57 | 0.2 | CD | 2 | |
| $CFO_2$ | 4.277 | 0.030 | LPES | 131 | |
| $CHCl_3$ | ≤0.78 | — | CT | 266 | |
| $CHO_2$ | 3.498 | 0.015 | LPES | 109 | |

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|
| $CH_2O_4$ | 2.1 | 0.2 | PT | 2 | $CO_3(H_2O)$ |
| $CH_2S$ | 0.465 | 0.023 | LPES | 53 | |
| $CD_3NO_2$ | 0.24 | 0.08 | LPES | 211 | |
| $CD_3O$ | 1.559 | 0.004 | LPES | 194 | |
| $CD_3O_2$ | 1.154 | 0.004 | LPES | 188 | $d_3$-methyl peroxyl radical |
| $CD_3S$ | 1.856 | 0.006 | LPT | 2 | |
| $CD_3S_2$ | 1.748 | 0.022 | LPES | 53 | |
| $CH_3$ | 0.08 | 0.03 | LPES | 2 | |
| $CH_3I$ | 0.11 | 0.02 | LPES | 277 | |
| $CH_3NO_2$ | 0.26 | 0.08 | LPES | 211 | |
| $CH_3O$ | 1.572 | 0.004 | LPES | 194 | |
| $CH_3O_2$ | 1.161 | 0.005 | LPES | 188 | methyl peroxyl radical |
| $CH_3S$ | 1.867 | 0.004 | LPES | 166 | |
| $CH_3S_2$ | 1.757 | 0.022 | LPES | 53 | |
| $CH_3Si$ | 0.852 | 0.010 | LPES | 97 | $CH_3$-Si |
| $CH_3Si$ | 2.010 | 0.010 | LPES | 97 | $CH_2$=SiH |
| $CH_4N$ | 0.432 | 0.015 | LPES | 215 | |
| $CH_5Si$ | 1.19 | 0.04 | LPT | 65 | $CH_3SiH_2$ |
| $CO_3$ | 2.69 | 0.14 | LPES | 2 | |
| $C_2F_2$ | 2.255 | 0.006 | LPES | 106 | difluorovinylidene |
| $C_2DN$ | 2.009 | 0.020 | LPES | 219 | DCCN |
| $C_2DN$ | 1.877 | 0.010 | LPES | 219 | DCNC |
| $C_2DO$ | 2.350 | 0.020 | LPES | 13 | |
| $C_2HF$ | 1.718 | 0.006 | LPES | 106 | monofluorovinylidene |
| $C_2HN$ | 2.003 | 0.014 | LPES | 219 | HCCN |
| $C_2HN$ | 1.883 | 0.013 | LPES | 219 | HCNC |
| $C_2HO$ | 2.338 | 0.008 | LPES | 190 | |
| $C_2HNPd$ | 2.17 | 0.03 | LPES | 291 | |
| $C_2HPd$ | 1.98 | 0.03 | LPES | 287 | |
| $C_2HPt$ | 2.650 | 0.010 | LPES | 287 | |
| $C_2D_2$ | 0.492 | 0.006 | LPES | 83 | vinylidene-$d_2$ |
| $C_2HD$ | 0.489 | 0.006 | LPES | 83 | vinylidene-$d_1$ |
| $C_2HFe$ | 1.4512 | 0.0025 | LPES | 254 | |
| $C_2HNi$ | 1.063 | 0.019 | LPES | 254 | |
| $C_2H_2$ | 0.490 | 0.006 | LPES | 83 | vinylidene |
| $C_2H_2FO$ | 2.22 | 0.09 | PT | 2 | acetyl fluoride enolate |
| $C_2D_2N$ | 1.538 | 0.012 | LPES | 21 | cyanomethyl-$d_2$ radical |
| $C_2D_2N$ | 1.070 | 0.024 | LPES | 21 | isocyanomethyl-$d_2$ radical |
| $C_2H_2Fe$ | 1.328 | 0.019 | LPES | 254 | |
| $C_2H_2N$ | 1.543 | 0.014 | LPES | 21 | cyanomethyl radical |
| $C_2H_2N$ | 1.059 | 0.024 | LPES | 21 | isocyanomethyl radical |
| $C_2H_2Ni$ | 2.531 | 0.005 | LPES | 287 | $HNiC_2H$ |
| $C_2H_3$ | 0.667 | 0.024 | LPES | 90 | vinyl |
| $C_2H_3Fe$ | 1.587 | 0.019 | LPES | 254 | |
| $C_2H_3Ni$ | 1.103 | 0.019 | LPES | 254 | |
| $C_2D_3O$ | 1.81897 | 0.00012 | LPT | 22 | acetaldehyde-$d_3$ enolate |
| $C_2H_3O$ | 1.82476 | 0.00012 | LPT | 22 | acetaldehyde enolate |
| $C_2D_5O$ | 1.699 | 0.004 | LPES | 194 | ethoxide-$d_3$ |
| $C_2H_5N$ | 0.56 | 0.01 | PT | 2 | ethyl nitrine |
| $C_2H_5O$ | 1.712 | 0.004 | LPES | 194 | ethoxide |
| $C_2H_5O_2$ | 1.186 | 0.004 | LPES | 188 | ethyl peroxyl radical |
| $C_2H_5S$ | 1.953 | 0.006 | LPT | 2 | ethyl sulfide |
| $C_2H_5S$ | 0.868 | 0.051 | LPES | 53 | $CH_3SCH_2$ |
| $C_2H_7O_2$ | 2.26 | 0.08 | PT | 50 | MeOHOMe |
| $C_3Fe$ | 1.69 | 0.08 | LPES | 132 | |
| $C_3H$ | 1.858 | 0.023 | LPES | 11 | |
| $C_3HFe$ | 1.58 | 0.06 | LPES | 132 | |
| $C_3H_2$ | 1.794 | 0.008 | LPES | 153 | |
| $C_3H_2F_3O$ | 2.625 | 0.010 | LPT | 113 | 1,1,1-trifluoroacetone enolate |
| $C_3H_3$ | 0.893 | 0.025 | LPES | 24 | propargyl radical |

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|
| $C_3H_2D$ | 0.88 | 0.15 | LPES | 24 | propargyl-$d_1$ radical |
| $C_3D_2H$ | 0.907 | 0.023 | LPES | 24 | propargyl-$d_2$ radical |
| $C_3H_3N$ | 1.247 | 0.012 | LPES | 21 | $CH_3CH$-CN |
| $C_3D_5$ | 0.464 | 0.006 | LPES | 138 | allyl-$d_5$ |
| $C_3H_5$ | 0.481 | 0.008 | LPES | 138 | allyl |
| $C_3H_5$ | 0.397 | 0.069 | kinetic | 155 | cyclopropyl |
| $C_3H_4D$ | 0.373 | 0.019 | LPES | 25 | allyl-$d_1$ |
| $C_3H_5O$ | 1.758 | 0.019 | LPT | 113 | acetone enolate |
| $C_3H_5O$ | 1.621 | 0.006 | LPT | 113 | propionaldehyde enolate |
| $C_3H_5O_2$ | 1.80 | 0.06 | PT | 2 | methyl acetate enolate |
| $C_3H_7O$ | 1.789 | 0.033 | LPES | 23 | propyl oxide |
| $C_3H_7O$ | 1.847 | 0.004 | LPES | 194 | isopropyl oxide |
| $C_3H_7S$ | 2.00 | 0.02 | PT | 2 | propyl sulfide |
| $C_3H_7S$ | 2.02 | 0.02 | PT | 2 | isopropyl sulfide |
| $C_3O$ | 1.34 | 0.15 | LPES | 11 | |
| $C_3O_2$ | 0.85 | 0.15 | LPES | 11 | |
| $C_3Ti$ | 1.561 | 0.015 | LPES | 147 | |
| $C_4F_4Cl_2$ | 0.87 | 0.08 | attach | 258 | 1,2-dichlorotetrafluoro-cyclobutene |
| $C_4F_4O_3$ | 0.5 | 0.2 | CD | 2 | tetrafluorosuccinic anhydride |
| $C_4F_8$ | 0.63 | 0.05 | attach | 256 | octafluorocyclobutane |
| $C_4Fe$ | <2.2 | 0.2 | LPES | 132 | |
| $C_4HFe$ | 1.67 | 0.06 | LPES | 132 | |
| $C_4H_2Fe$ | 1.633 | 0.019 | LPES | 254 | |
| $C_4H_2O_3$ | 1.44 | 0.10 | CT | 61 | maleic anhydride |
| $C_4H_3Fe$ | 1.182 | 0.019 | LPES | 254 | |
| $C_4H_3Ni$ | 0.824 | 0.019 | LPES | 254 | |
| $C_4D_4$ | 0.909 | 0.015 | LPES | 125 | vinylvinylidene-$d_4$ |
| $C_4H_4$ | 0.914 | 0.015 | LPES | 125 | vinylvinylidene |
| $C_4H_4N$ | 2.145 | 0.010 | LPES | 265 | pyrrolyl |
| $C_4H_4N_3O$ | 0.75 | — | LPES | 285 | NO (pyrimidine) |
| $C_4H_5O$ | 1.801 | 0.008 | LPT | 113 | cyclobutanone enolate |
| $C_4H_6$ | 0.431 | 0.006 | LPES | 135 | trimethylenemethane |
| $C_4H_6O_2$ | 0.69 | 0.10 | CT | 61 | 2,3-butanedione |
| $C_4H_6D$ | 0.493 | 0.008 | LPES | 138 | 2-methylallyl-$d_7$ |
| $C_4H_7$ | 0.505 | 0.006 | LPES | 138 | 2-methylallyl |
| $C_4H_7O$ | 1.67 | 0.05 | PT | 2 | butyraldehyde enolate |
| $C_4H_5DO$ | 1.67 | 0.05 | PT | 2 | 2-butanone-3-$d_1$ enolate |
| $C_4H_5D_2O$ | 1.75 | 0.06 | PT | 2 | 2-butanone-3,3-$d_2$ enolate |
| $C_4H_9O$ | 1.909 | 0.004 | LPES | 194 | *t*-butoxyl |
| $C_4H_9S$ | 2.03 | 0.02 | PT | 2 | *n*-butyl sulfide |
| $C_4H_9S$ | 2.07 | 0.02 | PT | 2 | *t*-butyl sulfide |
| $C_4O$ | 2.05 | 0.15 | LPES | 11 | |
| $C_4O_2$ | 2.0 | 0.2 | LPES | 11 | |
| $C_4Ti$ | 1.494 | 0.020 | LPES | 147 | |
| $C_5$ | 2.853 | 0.001 | LPT | 99 | |
| $C_5F_5N$ | 0.70 | 0.05 | attach | 259 | pentafluoropyridine |
| $C_5F_6O_3$ | 1.5 | 0.2 | CD | 2 | hexafluoroglutaric anhydride |
| $C_5HF_4N$ | 0.40 | 0.08 | attach | 259 | tetrafluoropyridine |
| $C_5D_5$ | 1.790 | 0.008 | LPES | 11 | cyclopentadienyl-$d_5$ |
| $C_5H_5$ | 1.804 | 0.007 | LPES | 11 | cyclopentadienyl |
| $C_5H_5NO_2$ | 1.39 | — | LPES | 285 | $O_2$ (pyridine) |
| $C_5H_5N_2O$ | 0.62 | — | LPES | 285 | NO (pyridine) |
| $C_5H_7$ | 0.91 | 0.03 | PT | 2 | pentadienyl |
| $C_5H_7NO_3$ | 1.87 | — | LPES | 285 | $O_2$ (pyridine · $H_2O$) |
| $C_5H_7O$ | 1.598 | 0.007 | LPT | 113 | cyclopentanone enolate |
| $C_5H_9O$ | 1.69 | 0.05 | PT | 2 | 3-penanone enolate |
| $C_5H_{11}O$ | 1.93 | 0.05 | LPT | 2 | neopentoxyl |
| $C_5H_{11}S$ | 2.09 | 0.02 | PT | 2 | pentyl sulfide |
| $C_5O_2$ | 1.2 | 0.2 | LPES | 11 | |
| $C_5Ti$ | 1.748 | 0.050 | LPES | 147 | |

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|
| $C_6$ | 4.180 | 0.001 | LPT | 8 | |
| $C_6Br_4O_2$ | 2.44 | 0.20 | CT | 2 | tetrabromo-BQ |
| $C_6Cl_4O_2$ | 2.78 | 0.10 | CT | 61 | tetrachloro-BQ |
| $C_6F_4O_2$ | 2.70 | 0.10 | CT | 61 | tetrafluoro-BQ |
| $C_6F_5Br$ | 1.15 | 0.11 | CT | 67 | pentafluorobromobenzene |
| $C_6F_5Cl$ | 0.75 | 0.05 | attach | 260 | pentafluorochlorobenzene |
| $C_6F_5I$ | 1.41 | 0.11 | CT | 67 | pentafluoroiodobenzene |
| $C_6F_5NO_2$ | 1.52 | 0.11 | CT | 67 | pentafluoro-NB |
| $C_6F_6$ | 0.53 | 0.05 | attach | 257 | hexafluorobenzene |
| $C_6F_{10}$ | >1.4 | 0.3 | CT | 2 | perfluorocyclohexane |
| $C_6H_2Cl_2O_2$ | 2.48 | 0.10 | CT | 61 | 2,6-dichloro-BQ |
| $C_6H_3F_2NO_2$ | 1.17 | 0.10 | CT | 61 | 2,4-difluoro-NB |
| $C_6D_4$ | 0.551 | 0.010 | LPES | 36 | *o*-benzyne-$d_4$ |
| $C_6H_4$ | 0.560 | 0.010 | LPES | 36 | *o*-benzyne |
| $C_6H_4BrNO_2$ | 1.16 | 0.10 | CT | 61 | *o*-bromo-NB |
| $C_6H_4BrNO_2$ | 1.32 | 0.10 | CT | 61 | *m*-bromo-NB |
| $C_6H_4BrNO_2$ | 1.29 | 0.10 | CT | 61 | *p*-bromo-NB |
| $C_6H_4ClNO_2$ | 1.14 | 0.10 | CT | 61 | *o*-chloro-NB |
| $C_6H_4ClNO_2$ | 1.28 | 0.10 | CT | 61 | *m*-chloro-NB |
| $C_6H_4ClNO_2$ | 1.26 | 0.10 | CT | 61 | *p*-chloro-NB |
| $C_6H_4ClO$ | ≤2.58 | 0.08 | PT | 2 | *o*-chlorophenoxide |
| $C_6H_4FNO_2$ | 1.07 | 0.10 | CT | 61 | *o*-fluoro-NB |
| $C_6H_4FNO_2$ | 1.23 | 0.10 | CT | 61 | *m*-fluoro-NB |
| $C_6H_4FNO_2$ | 1.12 | 0.10 | CT | 61 | *p*-fluoro-NB |
| $C_6H_4N_2O_4$ | 1.65 | 0.10 | CT | 61 | *o*-diNB |
| $C_6H_4N_2O_4$ | 1.65 | 0.10 | CT | 61 | *m*-diNB |
| $C_6H_4N_2O_4$ | 2.00 | 0.10 | CT | 61 | *p*-diNB |
| $C_6H_4O_2$ | 1.860 | 0.005 | LPES | 284 | 1,4-benzoquinone (BQ) |
| $C_6D_5$ | 1.092 | 0.020 | LPES | 26 | phenyl-$d_5$ |
| $C_6D_5N$ | 1.44 | 0.02 | LPES | 96 | phenylnitrene-$d_5$ |
| $C_6H_2O_2$ | 1.859 | 0.005 | LPES | 232 | dehydrobenzoquinone |
| $C_6H_3O_2$ | <2.18 | — | LPES | 232 | benzoquinonide |
| $C_6H_5$ | 1.096 | 0.006 | LPES | 26 | phenyl |
| $C_6H_5N$ | 1.429 | 0.011 | LPT | 115 | phenylnitrene |
| $C_6H_5NO_2$ | 1.00 | 0.01 | LPES | 164 | nitrobenzene (NB) |
| $C_6H_5O$ | 2.253 | 0.006 | LPES | 26 | phenoxyl |
| $C_6H_5S$ | <2.47 | 0.06 | PT | 2 | thiophenoxide |
| $C_6H_5NH$ | 1.70 | 0.03 | PT | 2 | anilide |
| $C_6H_6NO$ | 0.44 | — | LPES | 285 | NO (benzene) |
| $C_6H_6O_2$ | 1.06 | — | LPES | 285 | $O_2$ (benzene) |
| $C_6H_7$ | <1.67 | 0.04 | PT | 2 | methylchylopentadienyl |
| $C_6H_8$ | 0.855 | 0.010 | LPES | 203 | $(CH_2)_2C\text{-}C(CH_2)_2$ |
| $C_6H_8Si$ | 1.435 | 0.004 | LPT | 65 | $C_6H_5SiH_3$ |
| $C_6H_9$ | 0.654 | 0.010 | LPES | 203 | $CH_2{=}C(CH_3)\text{-}C(CH_2)_2$ |
| $C_6H_9O$ | 1.526 | 0.010 | LPT | 113 | cyclohexanone enolate |
| $C_6H_{10}$ | 0.645 | 0.015 | LPES | 126 | *t*-butyl vinylidene |
| $C_6H_{11}O$ | 1.755 | +0.05/-0.005 | LPT | 113 | pinacolone enolate |
| $C_6H_{11}O$ | 1.82 | 0.06 | PT | 2 | 3,3-dimethylbutananl enolate |
| $C_6N_4$ | 2.3 | 0.3 | PT | 2 | TCNE |
| $C_7F_5N$ | 1.11 | 0.11 | CT | 67 | pentafluorobenzonitrile |
| $C_7F_8$ | 0.86 | 0.11 | CT | 67 | octafluorotoluene |
| $C_7F_{14}$ | 1.08 | 0.10 | CT | 61 | perfluoromethylcyclohexane |
| $C_7HF_5O$ | 1.10 | 0.11 | CT | 67 | pentafluorobenzaldehyde |
| $C_7H_3N_3O_4$ | 2.16 | 0.10 | CT | 61 | 3,5-$(NO_2)_2$-benzonitrile |
| $C_7H_4F_3NO_2$ | 1.41 | 0.10 | CT | 61 | *m*-trifluoromethyl-NB |
| $C_7H_4N_2O_2$ | 1.61 | 0.10 | CT | 61 | *o*-cyano-NB |
| $C_7H_4N_2O_2$ | 1.56 | 0.10 | CT | 61 | *m*-cyno-NB |
| $C_7H_4N_2O_2$ | 1.72 | 0.10 | CT | 61 | *p*-cyano-NB |
| $C_7H_6Br$ | 1.308 | 0.008 | LPES | 167 | *o*-bromobenzyl |
| $C_7H_6Br$ | 1.307 | 0.008 | LPES | 167 | *m*-bromobenzyl |

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|
| $C_7H_6Br$ | 1.229 | 0.008 | LPES | 167 | *p*-bromobenzyl |
| $C_7H_6Cl$ | 1.257 | 0.008 | LPES | 167 | *o*-chlorobenzyl |
| $C_7H_6Cl$ | 1.272 | 0.008 | LPES | 167 | *m*-chlorobenzyl |
| $C_7H_6Cl$ | 1.174 | 0.008 | LPES | 167 | *p*-chlorobenzyl |
| $C_7H_6F$ | 1.091 | 0.008 | LPES | 167 | *o*-fluorobenzyl |
| $C_7H_6F$ | 1.173 | 0.008 | LPES | 167 | *m*-fluorobenzyl |
| $C_7H_6F$ | 0.937 | 0.008 | LPES | 167 | *p*-fluorobenzyl |
| $C_7H_6FO$ | 2.218 | 0.010 | LPT | 2 | *m*-fluoroacetophenone enolate |
| $C_7H_6FO$ | 2.176 | 0.010 | LPT | 2 | *p*-fluoroacetophenone enolate |
| $C_7H_6FeO_3$ | 0.990 | 0.10 | CT | 120 | $\eta_4$-1,3-butadiene-Fe(CO)$_3$ |
| $C_7H_6N_2O_4$ | 1.77 | 0.05 | PT | 60 | 3,4-dintrotoluene |
| $C_7H_6N_2O_4$ | 1.77 | 0.05 | PT | 60 | 2,3-dinitrotoluene |
| $C_7H_6N_2O_4$ | 1.60 | 0.05 | PT | 60 | 2,4-dinitrotoluene |
| $C_7H_6N_2O_4$ | 1.55 | 0.05 | PT | 60 | 2,6-dinitrotoluene |
| $C_7H_6O_2$ | 1.85 | 0.10 | CT | 61 | *o*-$CH_3$-BQ |
| $C_7H_7$ | 0.912 | 0.006 | LPES | 26 | benzyl |
| $C_7H_7$ | 0.868 | 0.006 | LPES | 136 | 1-quadricyclanide |
| $C_7H_7$ | 0.962 | 0.006 | LPES | 136 | 2-quadricyclanide |
| $C_7H_7$ | 1.286 | 0.006 | LPES | 136 | norbornadienide |
| $C_7H_7$ | 0.39 | 0.04 | LPES | 136 | cycloheptatrienide |
| $C_7H_7$ | 3.046 | 0.006 | LPES | 136 | 1-(1,6-heptadiynide) |
| $C_7H_7$ | >1.140 | 0.006 | LPES | 136 | 3-(1,6-heptadiynide) |
| $C_7H_7NO_2$ | 0.92 | 0.10 | CT | 61 | *o*-methyl-NB |
| $C_7H_7NO_2$ | 0.99 | 0.10 | CT | 61 | *m*-methyl-NB |
| $C_7H_7NO_2$ | 0.95 | 0.10 | CT | 61 | *p*-methyl-NB |
| $C_7H_7NO_3$ | 1.04 | 0.10 | CT | 61 | *m*-$OCH_3$-NB |
| $C_7H_7NO_3$ | 0.91 | 0.10 | CT | 61 | *p*-$OCH_3$-NB |
| $C_7H_7O$ | <2.36 | 0.06 | PT | 2 | *o*-methyl phenoxide |
| $C_7H_7O$ | 2.14 | 0.02 | PT | 50 | benzyloxide |
| $C_7H_8FO$ | <3.05 | 0.06 | PT | 50 | $PhCH_2OHF$ |
| $C_7H_9$ | 1.27 | 0.03 | PT | 2 | heptatrienyl |
| $C_7H_9O$ | 1.61 | 0.05 | PT | 2 | 2-norbornanone enolate |
| $C_7H_9Si$ | 1.33 | 0.04 | LPT | 65 | $C_6H_5(CH_3)SiH$ |
| $C_7H_{11}O$ | 1.598 | 0.007 | LPT | 113 | cycloheptanone enolate |
| $C_7H_{11}O$ | 1.49 | 0.04 | PT | 2 | 2,5-dimethyl-cyclopentanone enolate |
| $C_7H_{13}O$ | 1.72 | 0.06 | PT | 2 | 4-heptanone enolate |
| $C_7H_{13}O$ | 1.46 | 0.04 | PT | 2 | diisopropyl ketone enolate |
| $C_8F_{14}N_2$ | 1.89 | 0.10 | CT | 51 | 1,4-$(CN)_2C_6F_4$ |
| $C_8H_3F_5O$ | 0.88 | 0.11 | CT | 67 | pentafluoroacetophenone |
| $C_8H_3F_6NO_2$ | 1.79 | 0.10 | CT | 61 | 3,5-$(CF_3)_2$-NB |
| $C_8H_4F_3N$ | 0.70 | 0.05 | attach | 263 | *o*-trifluoromethylbenzonitrile |
| $C_8H_4F_3N$ | 0.67 | 0.05 | attach | 263 | *m*-trifluoromethylbenzonitrile |
| $C_8H_4F_3N$ | 0.83 | 0.05 | attach | 263 | *p*-trifluoromethylbenzonitrile |
| $C_8H_4O_3$ | 1.21 | 0.10 | CT | 61 | phthalic anhydride |
| $C_8H_6$ | 1.044 | 0.008 | LPES | 148 | |
| $C_8H_7$ | 1.091 | 0.008 | LPES | 134 | |
| $C_8H_7O$ | 2.057 | 0.010 | PT | 2 | acetophenone enolate |
| $C_8H_7O$ | 2.10 | 0.08 | LPT | 2 | phenylacetaldehyde enolate |
| $C_8H_8$ | 0.55 | 0.02 | CT | 134 | cyclooctatetraene |
| $C_8H_8$ | 0.919 | 0.008 | LPES | 139 | *m*-xylylene |
| $C_8H_9NO_2$ | 1.21 | 0.05 | PT | 60 | 3,5-dimethyl-NB |
| $C_8H_9NO_2$ | 2.61 | 0.05 | PT | 60 | 2,6-dimethyl-NB |
| $C_8H_9NO_2$ | 0.86 | 0.10 | CT | 61 | 2,3-dimethyl-NB |
| $C_8H_{13}O$ | 1.63 | 0.06 | PT | 2 | cyclooctanone enolate |
| $C_8S_2$ | 0.049 | 0.005 | LPES | 230 | bithiophene |
| $C_9H_8FeO_3$ | 0.76 | 0.10 | CT | 120 | $\eta_4$-1,3-cyclohexadiene-Fe(CO)$_3$ |
| $C_9H_9O$ | 2.030 | 0.010 | LPT | 2 | *m*-methylacetophenone enolate |
| $C_9H_9SiN$ | 1.43 | 0.10 | PT | 2 | trimethylsilylnitrene |
| $C_9H_{11}NO_2$ | 0.70 | 0.10 | CT | 61 | 2,4,6-trimethyl-NB |

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|
| $C_9H_{15}O$ | 1.69 | 0.06 | PT | 2 | cyclononanone enolate |
| $C_{10}H_4C_{l2}O_2$ | 2.19 | 0.10 | CT | 61 | 2,3-dichloro-1,4-naphthoquinone |
| $C_{10}H_6N_2O_4$ | 1.78 | 0.10 | CT | 61 | 1,3-dinitronaphthalene |
| $C_{10}H_6N_2O_4$ | 1.77 | 0.10 | CT | 61 | 1,5-dinitronaphthalene |
| $C_{10}H_6O_2$ | 1.81 | 0.10 | CT | 61 | 1,4-naphthoquinone |
| $C_{10}H_7$ | 1.403 | 0.015 | LPES | 197 | 1-naphthyl radical |
| $C_{10}H_7NO_2$ | 1.23 | 0.10 | CT | 61 | 1-nitronaphthalene |
| $C_{10}H_7NO_2$ | 1.18 | 0.10 | CT | 61 | 2-nitronaphthalene |
| $C_{10}H_8$ | 0.790 | 0.008 | LPES | 230 | azulene |
| $C_{10}H_8CrO_3$ | 0.93 | 0.10 | CT | 120 | $\eta_4$-1,3,5-cycloheptatriene $Cr(CO)_3$ |
| $C_{10}H_8FeO_3$ | 0.98 | 0.10 | CT | 120 | $\eta_4$-1,3,5-cycloheptatriene-$Fe(CO)_3$ |
| $C_{10}H_8NO$ | 0.66 | — | LPES | 285 | $NO^-$(naphthlene) |
| $C_{10}H_8O_2$ | 1.41 | — | LPES | 285 | $O_2$ (naphthlene) |
| $C_{10}H_{10}O_3$ | 2.09 | — | LPES | 285 | $O_2$ (naphthlene · $H_2O$) |
| $C_{10}H_{12}O_4$ | 2.72 | — | LPES | 285 | $O_2$ (naphthlene · $(H_2O)_2$) |
| $C_{10}H_{17}O$ | 1.83 | 0.06 | PT | 2 | cyclodecanone enolate |
| $C_{11}H_8FeO_3$ | 1.29 | 0.10 | CT | 120 | $\eta_4$-1,3-butadiene-$Fe(CO)_3$ |
| $C_{12}F_{10}$ | 0.82 | 0.11 | CT | 67 | decafluorobiphenyl |
| $C_{12}H_4N_4$ | 2.8 | 0.3 | CD | 2 | TCNQ |
| $C_{12}H_9$ | 1.07 | 0.10 | PT | 2 | perinaphthenyl |
| $C_{12}H_{12}NO$ | 0.79 | — | LPES | 285 | NO $(benzene)_2$ |
| $C_{12}H_{15}O$ | 2.032 | 0.010 | LPT | 2 | *t*-butylacetophenone enolate |
| $C_{12}H_{21}O$ | 1.90 | 0.07 | PT | 2 | cyclododecanone enolate |
| $C_{13}F_{10}O$ | 1.52 | 0.11 | CT | 67 | decafluorobenzophenone |
| $C_{13}H_9FO$ | 0.64 | 0.10 | CT | 61 | 4-fluorobenzophenone |
| $C_{13}H_{10}O$ | 0.62 | 0.10 | CT | 61 | benzophenone |
| $C_{14}H_9NO_2$ | 1.43 | 0.10 | CT | 61 | 9-nitroanthracene |
| $C_{14}H_{10}$ | 0.530 | 0.005 | LPES | 286 | anthracene |
| $C_{14}H_{12}O$ | 0.770 | 0.005 | LPES | 286 | anthracene · $H_2O$ |
| $(C_{14}H_{10})_n$ | $n$=1-16 | — | LPES | 231 | anthracene clusters |
| $C_{16}H_{10}$ | 0.406 | 0.010 | LPES | 270 | pyrene |
| $C_{18}H_{12}$ | 1.04 | 0.10 | CT | 66 | tetracene |
| $C_{20}H_{12}$ | 0.79 | 0.10 | CT | 66 | benz[a]pyrene |
| $C_{20}H_{12}$ | 0.973 | 0.005 | LPES | 236 | perylene |
| $C_{20}H_{16}NO$ | 1.06 | — | LPES | 285 | NO $(naphthalene)_2$ |
| $C_{22}H_{14}$ | 1.35 | 0.10 | CT | 66 | pentacene |
| $C_{44}Cl_{28}FeN_4$ | 2.59 | 0.11 | CT | 186 | $FeTPPCl_{28}$ |
| $C_{44}Cl_8F_{20}FeN_4$ | 3.21 | 0.03 | CT | 186 | $FeTPP\beta Cl_8$ |
| $C_{44}Cl_9F_{20}FeN_4$ | 3.35 | 0.03 | CT | 186 | $FeTPPF_{20}\beta Cl_8Cl$ |
| $C_{44}H_8F_{20}FeN_4$ | 2.15 | 0.15 | CT | 186 | $FeTPPF_{20}$ |
| $C_{44}H_8ClF_{20}FeN_4$ | 3.14 | 0.03 | CT | 186 | $FeTPPF_{20}Cl$ |
| $C_{44}H_8Cl_{21}FeN_4$ | 2.93 | 0.23 | CT | 186 | $FeTPPoCl_{20}Cl$ |
| $C_{44}H_{12}Cl_{17}FeN_4$ | 3.14 | 0.03 | CT | 186 | $FeTPPoCl_8\beta Cl_8Cl$ |
| $C_{44}H_{20}Cl_8FeN_4$ | 1.86 | 0.03 | CT | 186 | $FeTPPoCl_8$ |
| $C_{44}H_{20}Cl_9FeN_4$ | 2.10 | 0.19 | CT | 186 | $FeTPPoCl_8Cl$ |
| $C_{44}H_{28}FeN_4$ | 1.87 | 0.03 | CT | 186 | iron tetraphenylporphyrin (FeTPP) |
| $C_{44}H_{28}NiN_4$ | 1.51 | 0.01 | CT | 186 | nickel tetraphenylporphyrin (NiTPP) |
| $C_{44}H_{28}ClFeN_4$ | 2.15 | 0.15 | CT | 186 | FeTPPCl |
| $C_{44}H_{30}N_4$ | 1.69 | 0.01 | CT | 186 | $H_2$ tetraphenylporphyrin |
| $C_{45}H_{29}NiN_4O$ | 1.74 | 0.01 | CT | 186 | NiTPPCHO |
| $C_{52}H_{39}FeN_7O$ | 1.97 | 0.03 | CT | 186 | FeTPP-val |
| $C_{60}$ | 2.65 | 0.05 | LPT | 201 | |
| $C_{60}F_2$ | 2.74 | 0.07 | Knud | 202 | |
| $C_{64}H_{64}FeN_8O_4$ | 2.07 | 0.03 | CT | 186 | FeTPP-piv |
| $C_{70}F_2$ | 2.80 | 0.07 | Knud | 202 | |
| $(benzene)_n$ | $n$=53-124 | — | LPES | 248 | |
| $(toluene)_n$ | $n$=33-139 | — | LPES | 248 | |
| $CeF_4$ | 3.8 | 0.4 | CT | 98 | |
| $Cl(CO_2)$ | 3.907 | 0.010 | LPES | 131 | |
| $Cl(H_2O)$ | $n$=1-4 | — | LPES | 250 | |

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|
| $Co_n$ | $n$=1-108 | — | LPES | 251 | |
| $CoBr_3$ | 4.6 | 0.1 | LPES | 249 | |
| $CoCl_3$ | 4.7 | 0.1 | LPES | 249 | |
| $CoF_4$ | 6.4 | 0.3 | CT | 98 | |
| $Cr(CO)_3$ | 1.349 | 0.006 | LPES | 94 | |
| $CrO_3$ | 3.66 | 0.02 | LPES | 241 | |
| $CrO_4$ | 4.98 | 0.09 | LPES | 241 | |
| $CrO_5$ | 4.4 | 0.1 | LPES | 241 | |
| $CsO_4$ | 2.5 | 0.2 | LPES | 252 | |
| $Cu_n$ | $n$=1-411 | — | LPES | 37 | |
| $CuBr_2$ | 4.35 | 0.05 | LPES | 237 | |
| $Cu_n(CN)_m$ | $n$=1-6 | $m$=1-6 | LPES | 159 | |
| $CuCl_2$ | 4.35 | 0.05 | LPES | 237 | |
| $F(H_2O)_n$ | $n$=1-4 | — | LPES | 242 | |
| $F(H_2O)_n$ | $n$=1-4 | — | LPES | 250 | |
| $Fe_n$ | $n$=3-34 | — | LPES | 149 | |
| $Fe(CO)_2$ | 1.22 | 0.02 | LPES | 2 | |
| $Fe(CO)_3$ | 1.8 | 0.2 | LPES | 2 | |
| $Fe(CO)_4$ | 2.4 | 0.3 | LPES | 2 | |
| $FeBr_3$ | 4.26 | 0.06 | LPES | 249 | |
| $FeBr_4$ | 5.50 | 0.08 | LPES | 249 | |
| $FeCl_3$ | 4.22 | 0.06 | LPES | 249 | |
| $FeCl_4$ | 6.00 | 0.08 | LPES | 249 | |
| $FeF_3$ | 3.6 | 0.1 | CT | 98 | |
| $FeF_4$ | 6.0 | estimate | CT | 98 | |
| $Fe_2H_2$ | 0.942 | 0.019 | LPES | 254 | |
| $Fe_nO_m$ | $n$=1-4 | $m$=1-6 | LPES | 152 | |
| $Ga_2As_3$ | 2.783 | 0.024 | LPES | 192 | |
| $Ga_xAs_y$ | $n$=2-50 | $n$=$x$+$y$ | LPES | 229 | |
| $Ga_2P_3$ | 2.991 | 0.026 | LPES | 192 | |
| $Ge_n$ | $n$=3-15 | — | LPES | 71 | |
| $Ge_xAs_y$ | $n$=5-30 | $n$=$x$+$y$ | LPES | 72 | |
| $GeH_3$ | <1.74 | 0.04 | PT | 2 | |
| $H(NH_3)_n$ | $n$=1,2 | — | LPES | 76 | |
| $HNO_3$ | 0.57 | 0.15 | CD | 2 | |
| $(H_2O)_n$ | $n$=2-19 | — | LPES | 77 | |
| $I(CO_2)$ | 3.225 | 0.001 | LPES | 131 | |
| $I(H_2O)_n$ | $n$=1-4 | — | LPES | 250 | |
| $In_xP_y$ | $n$=2-8 | $n$=$x$+$y$ | LPES | 137 | |
| $IrF_4$ | 4.7 | 0.3 | CT | 98 | |
| $IrF_6$ | 6.5 | 0.4 | CT | 98 | |
| $K_n$ | $n$=2-7 | — | LPES | 18 | |
| $KO_4$ | 2.8 | 0.2 | LPES | 252 | |
| $LiO_4$ | 3.3 | 0.2 | LPES | 252 | |
| $MnBr_3$ | 5.03 | 0.06 | LPES | 249 | |
| $MnCl_3$ | 5.07 | 0.06 | LPES | 249 | |
| $MnF_4$ | 5.5 | 0.2 | CT | 98 | |
| $MnO_3$ | 3.335 | 0.010 | LPES | 158 | |
| $Mo(CO)_3$ | 1.337 | 0.006 | LPES | 94 | |
| $MoF_5$ | 3.5 | 0.2 | CT | 98 | |
| $MoF_6$ | 3.8 | 0.2 | CT | 98 | |
| $MoO_3$ | 3.17 | 0.02 | LPES | 280 | |
| $Mo_2O_2$ | 2.24 | 0.02 | LPES | 280 | |
| $Mo_2O_3$ | 2.33 | 0.07 | LPES | 280 | |
| $Mo_2O_4$ | 2.13 | 0.04 | LPES | 280 | |
| $N_2CD$ | 2.622 | 0.005 | LPES | 154 | NCND |
| $N_2CH$ | 2.622 | 0.005 | LPES | 154 | NCNH |
| $(NH_3)_n$ | $n$=41-1100 | — | LPES | 77 | |
| $NH_2(NH_3)_n$ | $n$=1,2 | — | LPES | 78 | |
| $NO(H_2O)_n$ | $n$=1,2 | — | LPES | 75 | |

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. | |
|---|---|---|---|---|---|
| $NO_3$ | 3.937 | 0.014 | LPES | 85 | |
| $NO_3(H_2O)_n$ | $n$=0-6 | — | LPES | 240 | |
| $NO(N_2O)_n$ | $n$=1,2 | — | LPES | 79 | |
| $(NO)_2$ | >2.1 | — | LPES | 75 | |
| $(N_2O)_n$ | $n$=1,2 | — | LPES | 81 | |
| $Na_n$ | $n$=2-5 | — | LPES | 18 | |
| $(NaF)_n$ | $n$=1-7,12 | — | LPES | 64 | |
| $Na(NaF)_n$ | $n$=5,7-12 | — | LPES | 64 | |
| $NaO_4$ | 3.1 | 0.2 | LPES | 252 | |
| $NaO_5$ | 3.2 | 0.2 | LPES | 252 | |
| $NaSO_3$ | 2.3 | 0.2 | LPES | 252 | |
| $Nb_n$ | $n$=6-17 | — | LPES | 181 | |
| $Nb_8$ | 1.513 | 0.008 | LPES | 157 | |
| $Nb_3O$ | 1.393 | 0.006 | LPES | 169 | |
| $Ni_n$ | $n$=1-100 | — | LPES | 247 | |
| $Ni_n(benzene)_m$ | $n$=1-3 | $m$=1,2 | LPES | 295 | |
| $NiBr_3$ | 4.94 | 0.08 | LPES | 249 | |
| $NiCl_3$ | 5.20 | 0.08 | LPES | 249 | |
| $Ni(CO)_2$ | 0.643 | 0.014 | LPES | 2 | |
| $Ni(CO)_3$ | 1.077 | 0.013 | LPES | 2 | |
| Ni(CO)H | 1.126 | 0.010 | LPES | 293 | HNiCO |
| $OH(H_2O)$ | <2.95 | 0.15 | PT | 2 | |
| $OH(NH_3)$ | 2.35 | 0.07 | LPES | 234 | |
| $OH(N_2O)$ | 2.14 | 0.02 | LPES | 209 | |
| $OH(N_2O)_n$ | $n$=1-5 | — | LPES | 209 | |
| $OsF_4$ | 3.9 | 0.3 | CT | 98 | |
| $OsF_6$ | 6.0 | 0.3 | CT | 98 | |
| $P_5$ | 3.88 | 0.03 | LPES | 253 | |
| $PBr_3$ | 1.59 | 0.15 | CD | 2 | |
| $PBr_2Cl$ | 1.63 | 0.20 | CD | 2 | |
| $PCl_2Br$ | 1.52 | 0.20 | CD | 2 | |
| $PCl_3$ | 0.82 | 0.10 | CD | 2 | |
| $PF_5$ | 0.75 | 0.15 | CT | 121 | |
| $PO_3$ | 4.95 | 0.06 | LPES | 156 | |
| $POCl_2$ | 3.83 | 0.25 | CD | 2 | |
| $POCl_3$ | 1.41 | 0.20 | CD | 2 | |
| $PtF_4$ | 5.5 | 0.3 | CT | 98 | |
| $PtF_6$ | 7.0 | 0.4 | CT | 98 | |
| $ReF_6$ | 4.7 | estimate | CT | 98 | |
| $ReO_3$ | 3.6 | 0.1 | LPES | 216 | |
| $RhF_4$ | 5.4 | 0.3 | CT | 98 | |
| $RuF_4$ | 4.8 | 0.3 | CT | 98 | |
| $RuF_5$ | 5.2 | 0.4 | CT | 98 | |
| $RuF_6$ | 7.5 | 0.3 | CT | 98 | |
| $SF_4$ | 1.5 | 0.2 | CT | 91 | |
| $SF_5$ | 4.23 | 0.12 | e-scat | 204 | |
| $SF_6$ | 1.05 | 0.10 | CT | 56 | |
| $SO_3$ | 1.97 | 0.10 | LPES | 165 | |
| $(SO_2)_2$ | 0.6 | 0.2 | LPES | 80 | |
| $Sb_n$ | $n$=2-9 | — | LPES | 213 | |
| $Sb_5$ | 3.46 | 0.03 | LPES | 253 | |
| $ScBr_4$ | 6.13 | 0.08 | LPES | 249 | |
| $ScCl_4$ | 6.89 | 0.08 | LPES | 249 | |
| $SeF_6$ | 2.9 | 0.2 | CD | 2 | |
| $Si_4$ | 2.13 | 0.01 | LPES | 110 | |
| $Si_5$ | 2.59 | 0.02 | LPES | 110 | |
| $Si_7$ | 1.85 | 0.02 | LPES | 110 | |
| $Si_n$ | $n$=3-20 | — | LPES | 71 | |
| $Si_2C_3$ | 1.766 | 0.012 | LPES | 296 | linear Si-$C_3$-Si |

| Molecule | Electron affinity in eV | Uncertainty in eV | Method | Ref. |
|---|---|---|---|---|
| $SiD_3$ | 1.386 | 0.022 | LPES | 43 |
| $SiF_3$ | 2.41 | 0.22 | LPES | 17 |
| $SiF_4$ | ≤0 | — | LPES | 17 |
| $SiF_5$ | ≥4.66 | — | LPES | 17 |
| $Si_nF$ | *n*=2-11 | — | LPES | 17 |
| $SiH_3$ | 1.406 | 0.014 | LPES | 43 |
| $Si_3H$ | 2.53 | 0.01 | LPES | 182 |
| $Si_4H$ | 2.68 | 0.01 | LPES | 182 |
| $Si_nNa_m$ | *n*=4-11 | *m*=1-3 | LPES | 210 |
| $Sn_n$ | *n*=1-12 | — | LPES | 289 |
| $SnCH_2CN$ | 1.57 | 0.02 | LPES | 292 |
| $Sn(CN)_2$ | 2.622 | 0.004 | LPES | 292 |
| $Sn(CN)(CH_2CN)$ | 2.29 | 0.05 | LPES | 292 |
| $Ta_3O$ | 1.583 | 0.010 | LPES | 169 |
| $TeF_6$ | 3.34 | 0.17 | CD | 2 |
| $Ti_n$ | *n*=1-130 | — | LPES | 151 |
| $TiO_3$ | 4.2 | — | LPES | 172 |
| $UF_5$ | 3.7 | 0.2 | CT | 98 |
| $UF_6$ | 5.1 | 0.2 | CT | 98 |
| $UO_3$ | <2.1 | — | CT | 98 |
| $V_n$ | *n*=3-65 | — | LPES | 150 |
| $VF_4$ | 3.5 | 0.2 | CT | 98 |
| $V_2O_n$ | *n*=3-7 | — | LPES | 246 |
| $V_3O$ | 1.218 | 0.008 | LPES | 169 |
| $V_4O_{10}$ | 4.2 | 0.6 | CT | 101 |
| $W(CO)_3$ | 1.859 | 0.006 | LPES | 94 |
| $WF_5$ | 1.25 | 0.3 | CD | 18 |
| $WF_6$ | >3.5 | — | CT | 19 |
| $WO_3$ | 3.33 | +0.04/-0.15 | LPT | 86 |
| $WO_3$ | 3.9 | 0.2 | CT | 98 |

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