**The Electrochemical Series**

**More positive potential**

– good oxidising agents

– more easily reduced

– form positive electrode on RHS

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| **Reduction half-equations** | **Eθ / V** |
| OXIDISED FORM | F2(g) + 2 e– ⇌ 2 F–(aq)  | REDUCED FORM | +2.87 |
| H2O2(aq) + 2 H+(aq) + 2 e– ⇌ 2 H2O(l)  | +1.77 |
| HClO(g) + H+(aq) + 1 e– ⇌ ½ Cl2(g) + H2O(l)  | +1.59 |
| MnO4-(aq) + 8 H+(aq) + 5 e– ⇌ Mn2+(aq) + 4 H2O(l)  | +1.51 |
| Cl2(g) + 2 e– ⇌ 2 Cl–(aq)  | +1.36 |
| Cr2O72-(aq) + 14 H+(aq) + 6 e– ⇌ 2 Cr3+(aq) + 7 H2O(l)  | +1.33 |
| ½ O2(g) + 2 H+ + 2 e– ⇌ H2O(l)  | +1.23 |
| Ag+(aq) + 1 e– ⇌ Ag(s)  | +0.80 |
| Br2(g) + 2 e– ⇌ 2 Br–(aq)  | +1.07 |
| VO2+(aq) + 2 H+(aq) + 1 e– ⇌ VO2+(aq) + H2O(l)  | +1.00 |
| Fe3+(aq) + 1 e– ⇌ Fe2+(aq)  | +0.77 |
| O2(g) + 2 H+(aq) + 2 e– ⇌ H2O2(aq)  | +0.68 |
| MnO42-(aq) + 2 H2O(l) + 2 e– ⇌ MnO2(s) + 4 OH–(aq)  | +0.59 |
| MnO4-(aq) + 1 e– ⇌ MnO42-(aq)  | +0.56 |
| I2(s) + 2 e– ⇌ 2 I–(aq)  | +0.54 |
| Cu+(aq) + 1 e– ⇌ Cu(s)  | +0.52 |
| VO2+(aq) + 2 H+(aq) + 1 e– ⇌ V3+(aq) + H2O(l)  | +0.34 |
| Cu2+(aq) + 2 e– ⇌ Cu(s)  | **+0.34** |
| Cu2+(aq) + 1 e– ⇌ Cu+(aq)  | +0.15 |
| **2 H+(aq) + 2 e– ⇌ H2(g)**  | **0.00** |
| Sn2+(aq) + 2 e– ⇌ Sn(s)  | –0.14 |
| V3+(aq) + 1 e– ⇌ V2+(aq)  | –0.26 |
| Cr3+(aq) + 1 e– ⇌ Cr2+(aq)  | –0.41 |
| Fe2+(aq) + 2 e– ⇌ Fe(s)  | –0.44 |
| Zn2+(aq) + 2 e– ⇌ Zn(s)  | **–0.76** |
| Al3+(aq) + 3 e– ⇌ Al(s) | –1.66 |
| Mg2+(aq) + 2 e– ⇌ Mg(s)  | –2.38 |
| Ca2+(aq) + 2 e– ⇌ Ca(s)  | –2.87 |
| Ba2+(aq) + 2 e– ⇌ Ba(s)  | –2.90 |
| Li+(aq) + 1 e– ⇌ Li(s)  | –3.03 |

**More negative potential**

– good reducing agents

– more easily oxidised

– form negative electrode on left hand side (LHS)