Metals and their Compounds Lecture 5.4

Transition metals (23.7 and Ch 24 BLB)

Formation of *coordination compounds*

 $CuSO_4$ (copper(II) sulfate) solution contains the ion Cu^{2+}_{aq} usually written as $[Cu(H_2O)_6]^{2+}$

This is pale blue. Reactions demonstrated have formed two new *coordination compounds* of Cu^{2+} (these are *not* a redox reactions)

[Cu(H ₂ O) ₆] ²⁺	+ 4NH₃ → ammonia	[Cu(NH ₃) ₄] ²⁺ +6H ₂ O <i>deep blue</i>
[Cu(H ₂ O) ₆] ²⁺	+ 4Br⁻ → bromide	[CuBr ₄] ²⁻ + 6H ₂ O <i>purple</i>