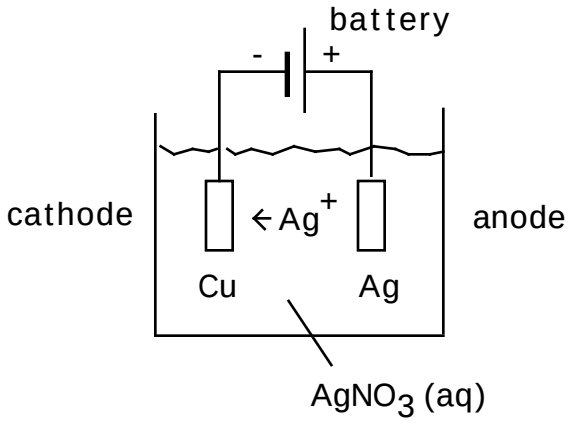
Chem12 Electroplating : Notes - 57

Electroplating

In this type of electrolytic cell, the anode is consumed and the metal is plated onto the cathode. In the cell below we can plate silver onto copper.



In the above cell the possible reactions are :

anode	$Ag \rightarrow Ag^+ + e^-$	-0.80 volts
	$2H_2O \rightarrow O_2 + 4H^+ + 4e^-$	-0.82 volts
cathode	$Ag^+ + e^- \rightarrow Ag$	+0.80 volts
	$2H_2O + 2e^- \rightarrow H_2 + 2OH^-$	-0.41 volts

The minimum voltage for this cell is 0.00 volts. Only a small voltage is necessary to make this cell work and plate silver onto copper.