

ELECTROCHEMISTRY LESSON-6 QUIZ: PREDICTING REDOX REACTIONS

Write the net redox reaction that will occur when chlorine gas, $\text{Cl}_2(\text{g})$, is bubbled through an aqueous solution of iron(II) sulfate, $\text{FeSO}_4(\text{aq})$. You must clearly show your process.

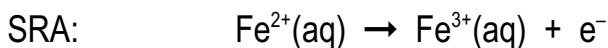
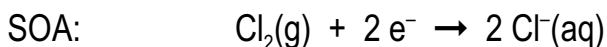
ANSWER

The species present are $\text{Cl}_2(\text{g})$, $\text{Fe}^{2+}(\text{aq})$, $\text{SO}_4^{2-}(\text{aq})$, $\text{H}_2\text{O}(\text{l})$.

The strongest oxidizing agent is $\text{Cl}_2(\text{g})$.

The strongest reducing agent is $\text{Fe}^{2+}(\text{aq})$.

The reaction is spontaneous [$\text{Fe}^{2+}(\text{aq})$ is lower than $\text{Cl}_2(\text{g})$ in the redox table].



Balance the charge transfer.

