

Answer on Question # 60528 - Chemistry - General Chemistry

If the short version of the Activity Series of Metals is K, Ca, Mg, Al, Zn, Fe, H₂, Cu, Ag, which of the following pairs will not react in a water solution?

Solution

The first two metals in the Activity Series (K and Ca) are too reactive and will expel hydrogen from water and should not be considered as well as gaseous hydrogen. Although Mg, Al, Zn, Fe are not so active as K and Ca, they are unstable in water and will not react with salts of each other. The only pairs which will react are Cu/Ag⁺, Cu²⁺/Mg, Cu²⁺/Al, Cu²⁺/Zn, Cu²⁺/Fe, Ag⁺/Mg, Ag⁺/Al, Ag⁺/Zn, Ag⁺/Fe. All other pairs will not react in a water solution.