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**The physical nature of Primary battery** LIU YUHONG, 13811867266, HAN YONGQUAN, 15611860790 — The reaction mechanism of the primary battery is that the sulfate ion in the copper sulfate solution is easier to grab the zinc ion combination in the zinc. Sulfate ions grab the zinc ions in zinc flakes, which is the process of plasma formation. The "zinc ions" in the zinc move toward the surface of the zinc sheet (the surface that is soaked in the copper sulfate solution). The zinc sheet and the copper sheet are connected by wires and are a unified conductor. The "zinc ions" move toward the surface of the zinc rod and form zinc. Positively charged, negatively charged copper plasma. The power plasma is transmitted in the solution. Copper and zinc bipolar exist in dilute CuSO4. Since zinc is more active than copper, it easily loses electrons, and zinc is oxidized into Zn2+ to enter the solution. Since the speed of the current is the speed of light, it is much faster than the speed of chemical reaction. Therefore, the lost electrons of the zinc film can only pass through the wire flowing to the copper sheet. The Cu2+ in the solution acquires electrons from the copper sheet and is reduced to copper atoms, the power source is the plasma, and the current is the transmission of the power plasma in the conductor.

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