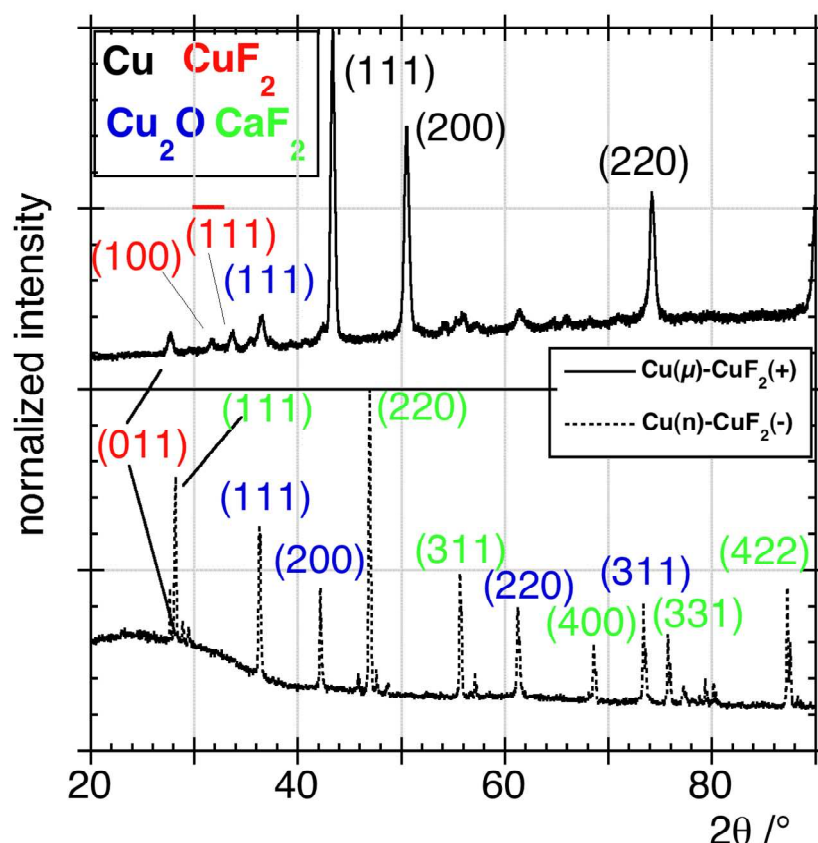


Supporting Information

The XRD spectra of the electrodes after an experiment are reported in the figure below.



According to the different composition of the electrodes (see the Experimental Section – Cell Assembly), the lines of copper in the negative electrode are lacking since the Cu nanoparticle concentration is too low to be detected. The Cu₂O features are mostly due to some reaction of CuF₂ with ambient moisture at room temperature. These lines are more intense in the negative electrode because this electrode was prepared with a greater amount of CuF₂. The presence of the CaF₂ lines is due to some contamination of the CaF₂ powder filling the cell holder (see the Experimental Section – Cell Assembly). The electrodes carry out some CaF₂ powder when they are removed from the cell holder.