

# Supplementary Information

## **Ru catalyst supported on nitrogen-doped Nanotubes as High efficiency Electrocatalysts for hydrogen Evolution in Alkaline**

### **Media**

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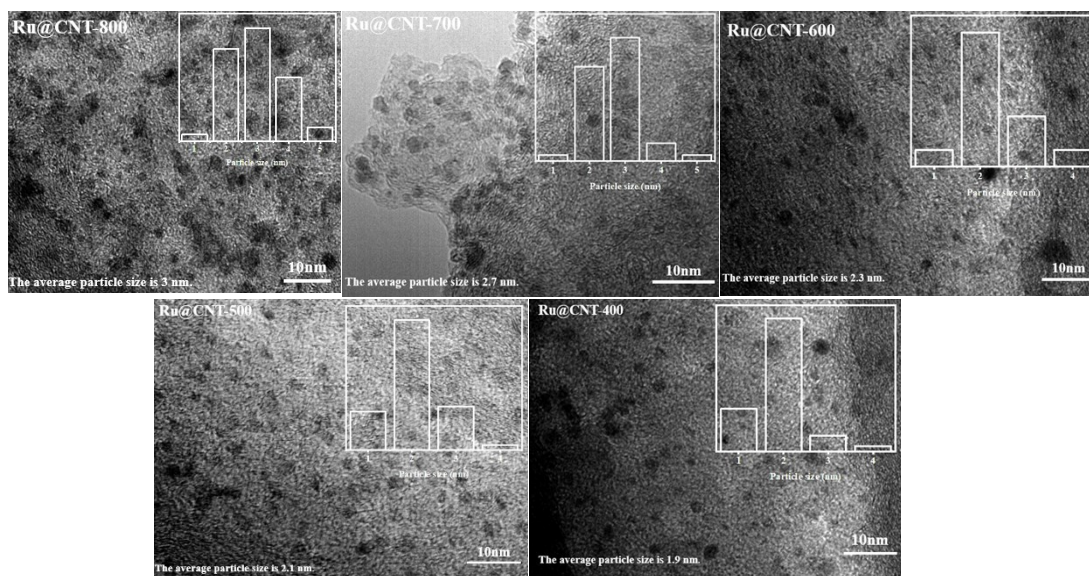


Fig.S1 TEM images of all Ru@CNT samples.

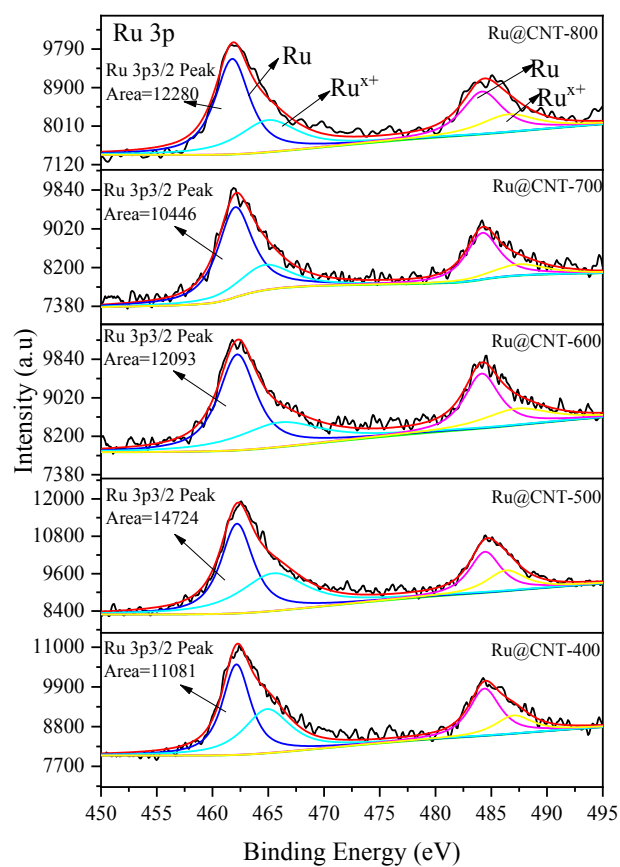


Fig.S2 Ru 3p spectra of all Ru@CNT samples.

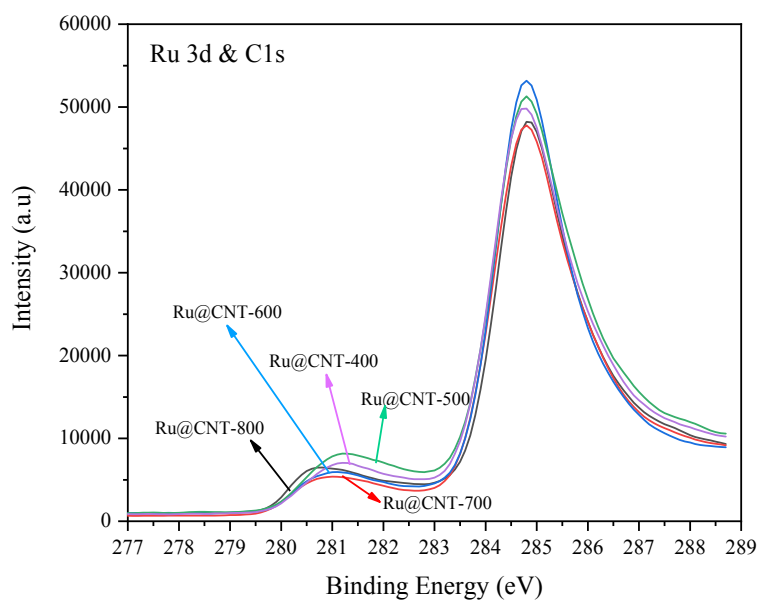


Fig.S3 Ru 3d spectra of all Ru@CNT samples.

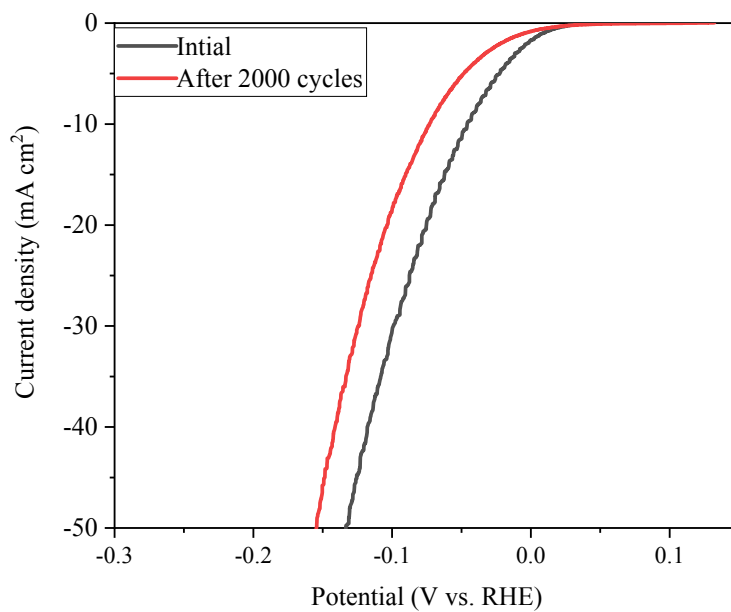


Fig.S4 HER polarization curves recorded before and after 2000 potential cycles.