Supplementary figures list:

Supplementary figures:

Figure S1. CV curve of the NiFe sample at 100 ˚C

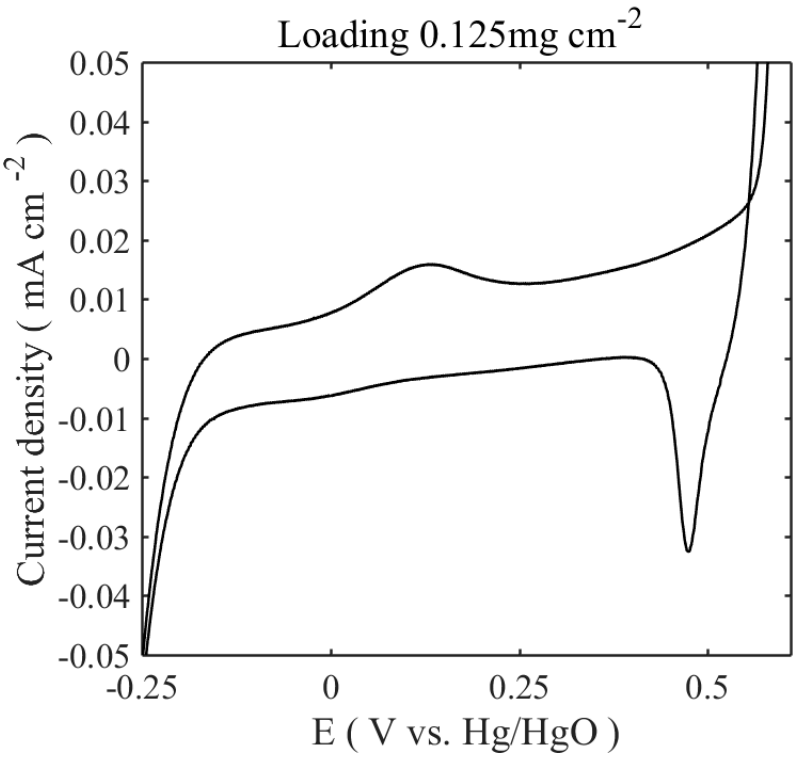


Figure S2. RDE curves of 0.125 and 0.25 mg cm^{-2} loadings of NiFe samples calcined at different temperature in 0.1 M KOH with 5 mV s^{-1}at different rotation rates (400-2500 rpm)

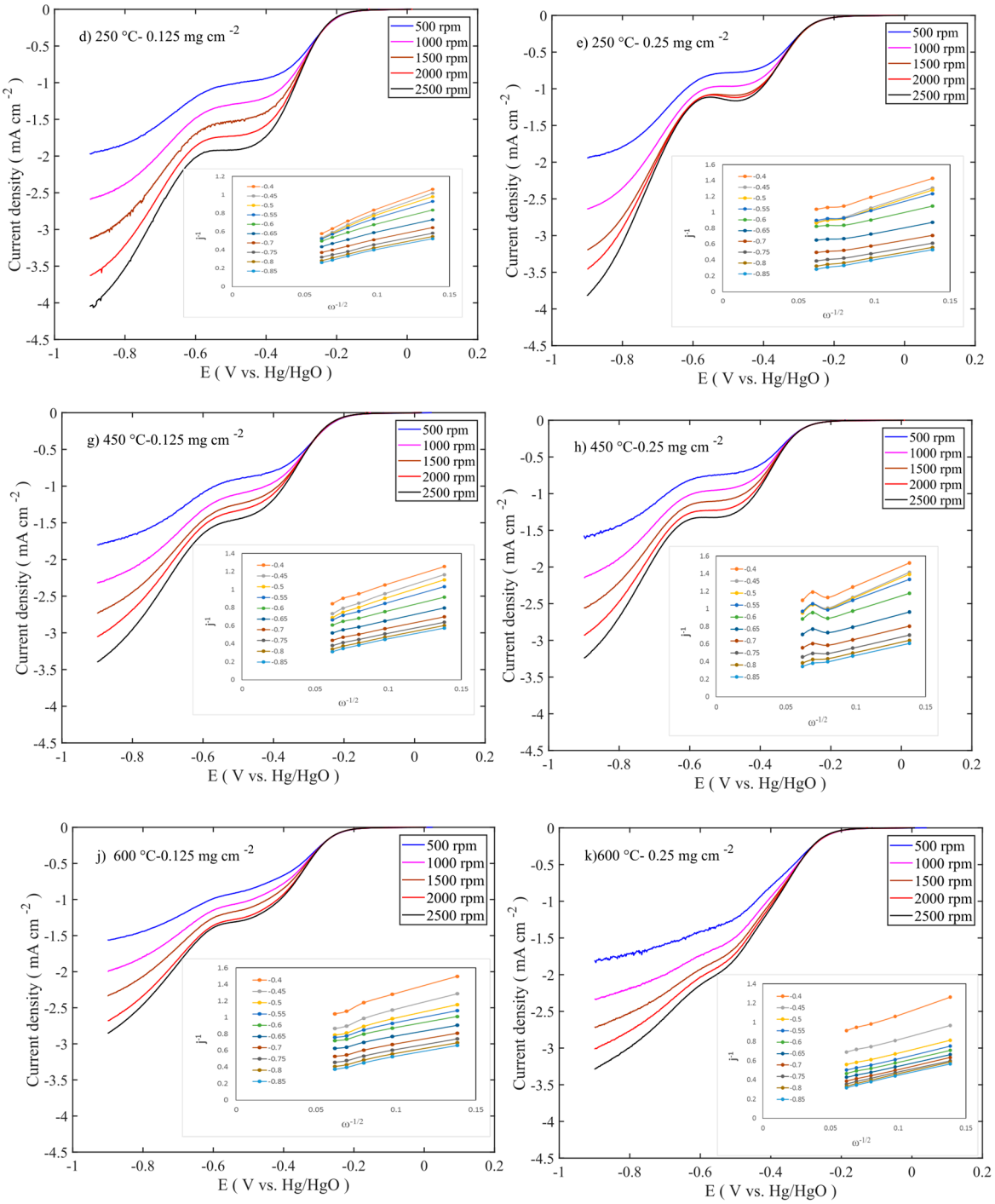


Figure S3. Electrochemical stability of Ni Fe oxide calcined at different temperature with three different mass loadings

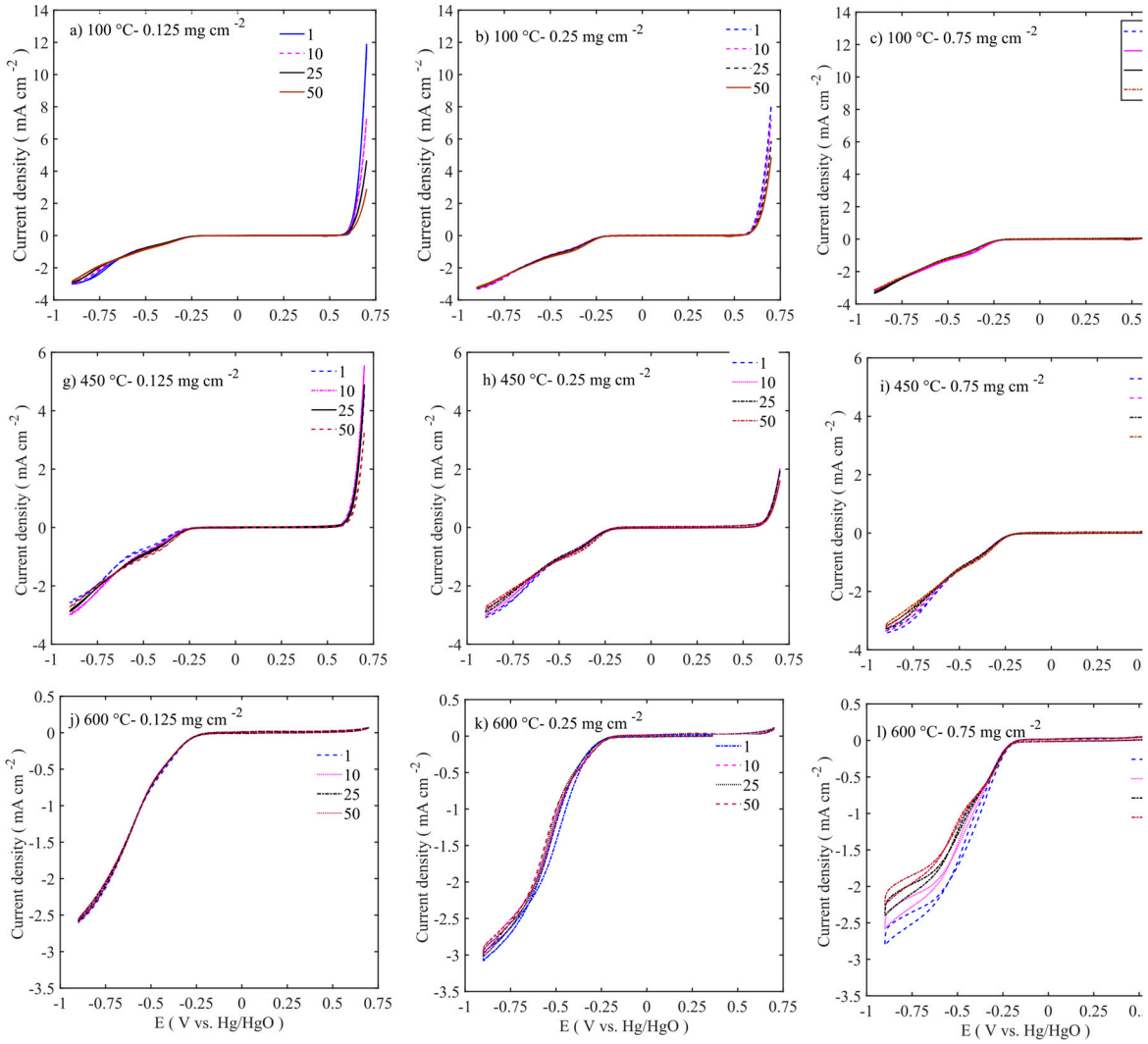


Figure S4. Raman spectra of the different samples a) 100-250 ˚C; b) 450-600 ˚C

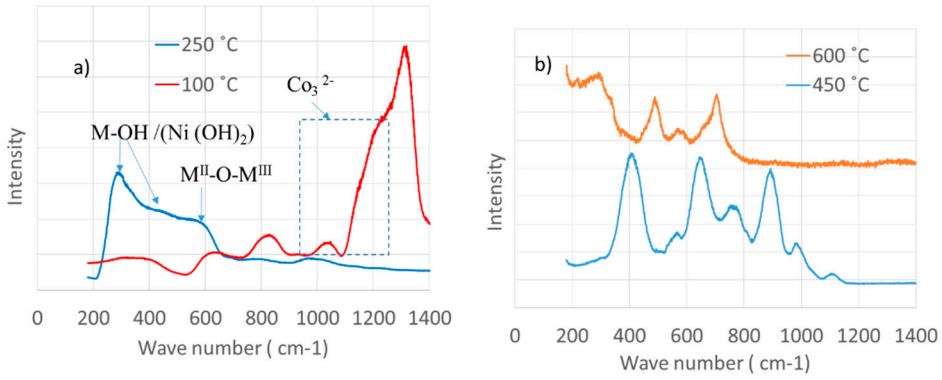
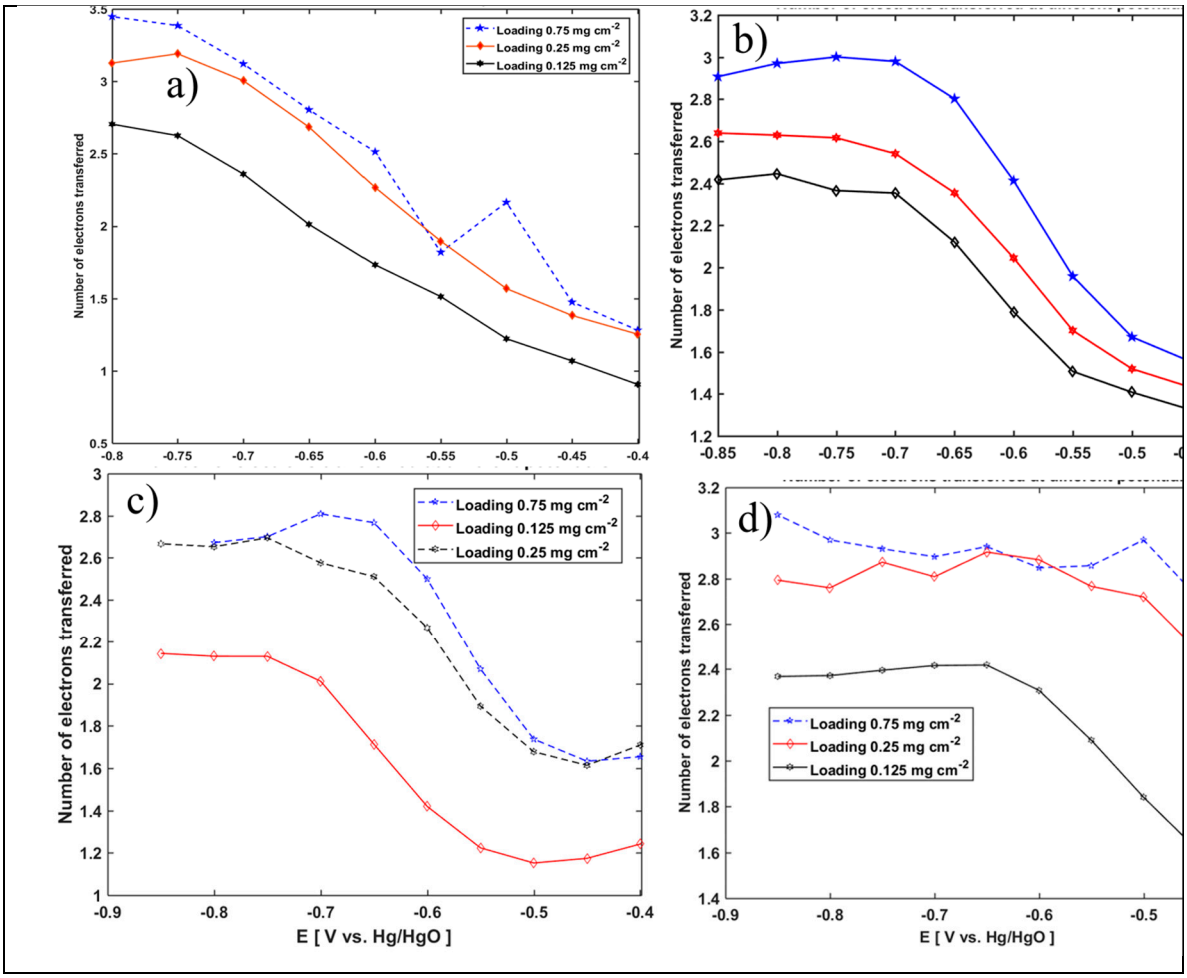


Figure S5.Relationship between number of electron trasferd per oxygen molecule vs. potentials at different loading



XPS fitting method:

We used Voigt functions within the fit-XPS software to numerically fit the XPS-spectra. For Ni2p we used three components representing Ni^{2+}, Ni^{3+} and a satellite peak, as indicated in the Figure. S1. For the 250 °C spectrum we could not separate the $Ni^{2+}$and Ni^{3+} peaks properly

and used only one broader peak. For O1s we used three different components, representing O in metal oxide ($NiFe_2O_4$), OH and H_2O. The water and OH components are not only from the sample, but have also atmospheric contributions from water adsorption in the air.

Table S1. Relative intensities of XPS components in O1s and Ni2p spectra

	100 °C	250 °C	400 °C	600 °C
Ni^{2+}	58%	--	71%	89%
Ni^{3+}	42%	--	29%	11%
Metal oxide	49%	24%	28%	88%
OH-	25%	39%	63%	10%
H_2O	26%	37%	9%	2%

Table S1. Relative intensities of XPS components in O1s and Ni2p spectra