

Supplementary Information

Ni foam electrodes solution impregnated with Ni-Fe_x(OH)_y catalysts for efficient oxygen evolution reaction in alkaline electrolyzers

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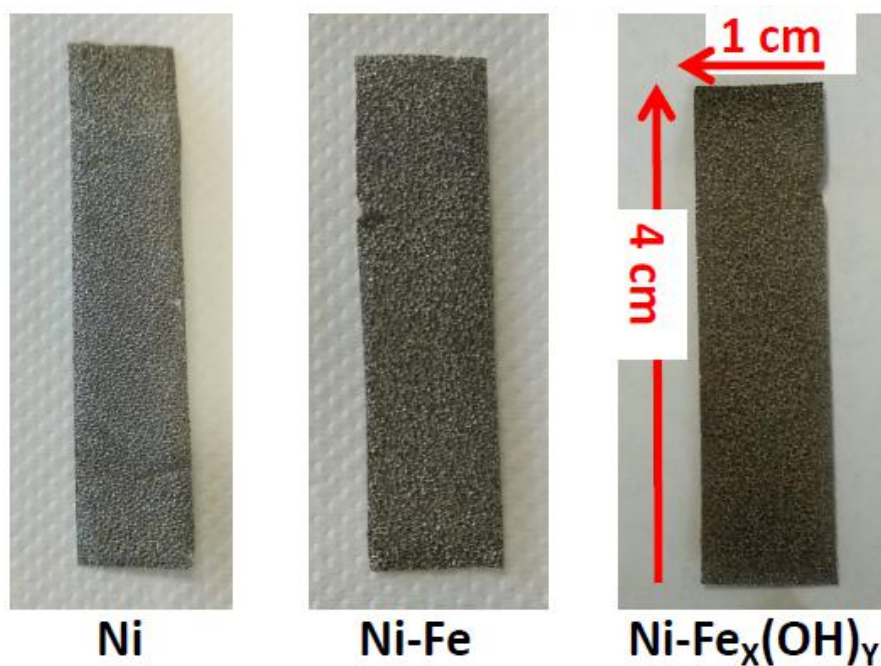


Figure S1: Digital images of the different catalysts developed on Ni-foams

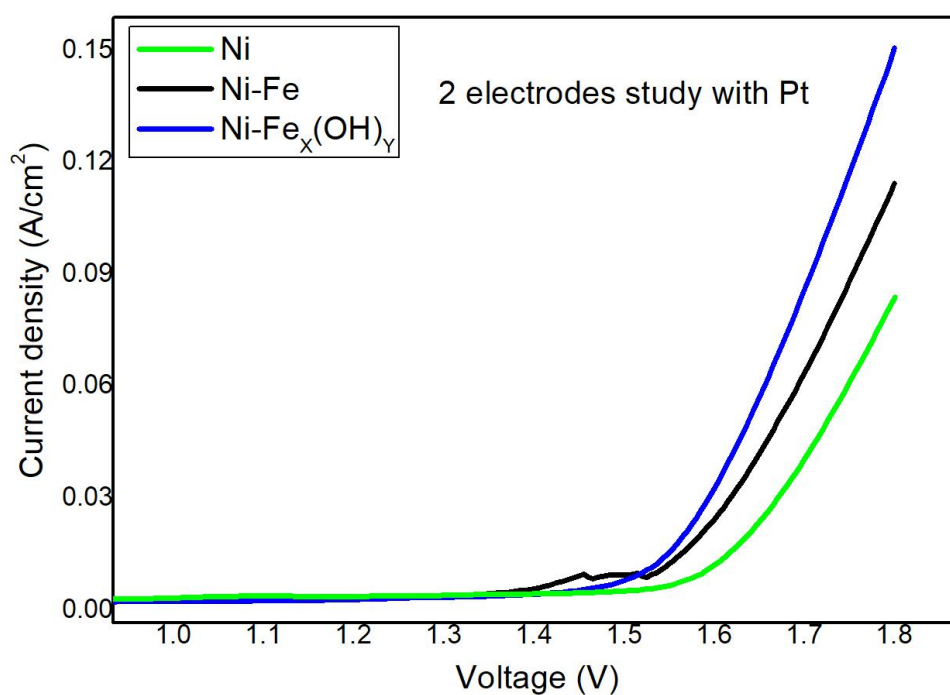


Figure S2: Polarization curves of Ni/Pt, Ni-Fe/Pt and Ni-Fe_x(OH)_y/Pt systems

Table S1: OER performances of different Ni-Fe based electrodes in 1M KOH

Materials and methods	Overpotential at 10 mA/cm² (mV)	Tafel slope (mV/dec)	References
Fe-doped Ni(OH) ₂ (Hydrothermal)	300	70.6	J. Mater. Chem. A, 2017,5, 24153-24158
Fe-Ni(OH) ₂ /NF (Hydrothermal)	267	51.5	Chem. Commun., 2018, 54, 463-466
NiFeOOH/CNT (Co-precipitation)	278	58	RSC Adv., 2016,6, 74536-74544
Ni-Fe LDH hollow prisms (Hydrolysis)	280	49.4	Angew Chem Int Edit, 2018, 57: 172-176
Fe _{0.1} Ni _{0.9} O (Solvothermal)	300	37	ACS Nano, 2015, 9, 5180-5188
NiFe double hydroxide (Hydrothermal)	323	77	ACS Energy Lett. 2017, 2, 1035–1042
NiFe-LDH hollow microsphere (Insitu growth technique on sacrificial template)	239	53	ACS Appl. Mater. Interfaces 2016, 8, 33697-33703
NiFe hydroxide film/GC (Electrodeposition)	240	38.9	Adv. Energy Mater. 2017, 7, 1602547
NiFe LDH/NF (Hydrothermal)	280 (η_{30})	50	Chem. Commun. 2014, 50, 6479-82
Ni-Fe_x(OH)_y (Wet chemical impregnation)	271	50.45	Present work