Supplementary Information

Ruthenium doped Ni_2P nanosheet array for active hydrogen evolution in neutral and alkaline water

Chengbo Wei[a, +], Xiaoming Fan[a, +], Xue Deng[a], Linzheng Ma[b], Xiao Zhang[a, *], Qingyun Liu[b], Jinxue Guo[a,*]

[a]*Key Laboratory of Optic-electric Sensing and Analytical Chemistry for Life Science, MOE, Key Laboratory of Biochemical Analysis, Shandong Province, College of Chemistry and Molecular Engineering, Qingdao University of Science & Technology, Qingdao 266042, China*

[b]*College of Chemistry and Environmental Engineering, Shandong University of Science and Technology, Qingdao 266590, China*

*****Corresponding author. E-mail:* xiaozhang@qust.edu.cn (X. Zhang); guojinxue@qust.edu.cn (J. Guo)

Number of SI table: 1

Table S1 Comparison of the electrochemical HER activities between the present Ru-Ni_2P/NF and recently reported HER catalysts in neutral/alkaline media. (η_{10}: Overpotentials at a current density of 10 mA cm^{-2}.)

Materials	Neutral		Alkaline		Reference
	η_{10}	Tafel	η_{10}	Tafel	
Ru-Ni_2P/NF	65	39	45	36	This work
MoP/CNT	86	72	102	118	[35]
Ni-Co-P/NF	156	108.4			[36]
Co-P/CC	209	129	--	--	[37]
Co-Ni-B	133	--	170	51	[38]
NiCoP/rGO	209	124.1	--	--	[39]
Ni_2P/NF	221	--	--	--	[40]
Mn-Ni_2P/NF	103	135	--	--	[41]
Fe-P/CC	159	--	115	70	[42]
Ni_5P_4/Ti	47.1	56	--	--	[43]
Ru@C_2N	17	38	--	--	[44]
RuCo@NC	28	31	--	--	[45]
PdP_2@CB	35.4	42.1	84.6	72.3	[46]
Ni_2P-NiP_2/NF	59.7	58.8	--	--	[47]
CoP NA/CC	52	60	145	123	[48]

1Co-ns ： Cobalt-phosphonate coordination polymer nanosheets