Facile construction of N-doped carbon nanotubes encapsulated Co nanoparticles as a highly efficient multifunctional catalyst for electrochemical reactions

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Supporting Information

Contents

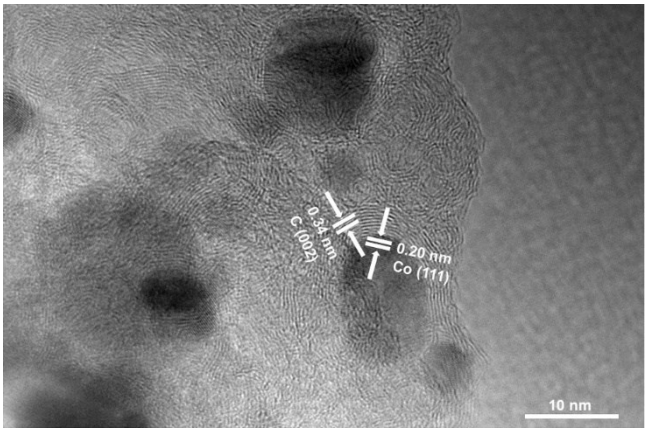

Fig. S1 High magnified TEM image of Co@NCNDs.

Table S1. List of the ORR, OER and HER performances of the recently reported non-precious metal catalysts in 0.1 or 1 M KOH solution. All measured potentials were normalized to a reversible hydrogen electrode (RHE) scale.

Materials	E_O / V	$E_{1/2}$ / V	$\eta_{10,\,OER}$ / V	$\eta_{10,\,HER}$ / V	ΔE ($E_{j=10,OER}$ - $E_{1/2,ORR}$)	**References**
Co@NCNTs	1.01	0.87	0.33	0.28	0.69	This work
CoFe@N-GCNCs-700	0.86	0.80	0.27	0.09	0.70	[1]
CoP-PBSCF	0.80	0.75	0.38	0.21	0.86	[2]
PPy/FeTCPP/Co	1.01	0.86	0.38	0.24	0.75	[3]
3D-CNTA	0.96	0.81	0.36	0.19	0.72	[4]
CF-NG-Co	0.97	0.88	0.40	0.18	0.76	[5]
NiCoP/CNF900	0.94	0.82	0.27	0.13	0.68	[6]
MNG-CoFe	0.98	0.70	0.39	0.23	0.92	[7]
MSZIF-900	0.93	0.84	0.34	0.23	0.73	[8]
DG	0.91	0.76	0.34	0.34	0.81	[9]
CoDNG900	0.94	0.83	0.40	0.23	0.80	[10]

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