

Exploring Spinel Oxides from Bimetallic to High-Entropy with a Focus on Structure and Performance in Oxygen Evolution Reaction

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Table. S1 Overpotentials of noble and non-noble metal spinel oxides in the OER.

Electrocatalysts	Overpotential (mV)	Current Density (mA cm ⁻²)	Electrolytes	References
RuO ₂ /Co ₃ O ₄ -RuCo@NC	247	10	0.5 M H ₂ SO ₄	77
Fe ₃ O ₄ /RuO ₂ @NEU7	250	10	1 M KOH	78
Ru/RuO ₂ -Co ₃ O ₄	226	10	0.1 M HClO ₄	81
RuO ₂ /(Co,Mn) ₃ O ₄	270	10	0.5 M H ₂ SO ₄	82
Ir _{0.06} Co _{2.94} O ₄	300	5.99	0.1 M HClO ₄	83
Ir-NiCo ₂ O ₄ NSs	240	10	0.5 M H ₂ SO ₄	84
Ir-Co ₃ O ₄	236	10	0.5 M H ₂ SO ₄	85
NiCo ₂ O ₄ nanoneedles	292	10	1 M KOH	88
core-ring NiCo ₂ O ₄ nanoplatelets	315	100	1 M KOH	89
NiCo ₂ O ₄ nanoframes	265	10	1 M KOH	92
Zn _x Co _{3-x} O ₄ nanostructure	320	10	1 M KOH	93
Zn _x Co _{3-x} O ₄	250	10	0.1 M KOH	94

ZnCo ₂ O ₄	430	20	0.1 M KOH	95
Zn _x Co _{3-x} O ₄ film	330	10	1 M NaOH	96
ZnCo ₂ O ₄ micro-spindle	389	10	1 M KOH	97
CuCo ₂ O ₄ /NF	296	20	1 M KOH	98
CuCo ₂ O ₄ nanosheets	290	20	1 M KOH	99
CuCo ₂ O ₄ /NrGO electrocatalyst	360	10	1 M KOH	101
When iron is added to FeCo ₂ O ₄ /CNF	120	10	1 M KOH	102
MnCo ₂ O ₄	400	10	0.1 M KOH	104
V ₀ MnCo ₂ O ₄	400	10	0.1 M KOH	106
P-FeNiO/CNS	220	10	1 M KOH	108
NC@NFO	230	100	1 M KOH	109
CoFe ₂ O ₄	360	10	1 M KOH	110
CoFe ₂ O ₄ nanoplates	410	10	1 M NaOH	111
CoFe ₂ O ₄ nanocubes	450	10	1 M NaOH	111
CoFe ₂ O ₄ NP-coated CFPs	378	10	1 M NaOH	112
CoFe ₂ O ₄ hollow nanospheres	320	10	1 M KOH	113
ZnFe ₂ O ₄	319	50	1 M KOH	114
ZFO-NG	240	10	1 M KOH	115
CNTP/ZHS	207	10	1 M KOH	116
CuFe ₂ O ₄ /PCFs	329	10	1 M KOH	117
MnFe ₂ O ₄ spheres	156	10	1 M KOH	121
Fe/Mn-N-C	340	10	0.1 M KOH	122
NiCrFeO ₄	264	10	1 M KOH	124
FeNiCo ₂ O ₄	350	10	1 M KOH	125
CoMnWO ₄	400	10	0.1 M KOH	127
LiNiAlO ₂	330	50	0.1 M KOH	128

NiCoFeO ₄	310	10	1 M KOH	131
Co-Sn-Mo-Sb oxides	440	10	1 M KOH	133
CoFeNiCrMn mixed oxides	307	10	1 M KOH	134
(FeCoNiCuZn)Al ₂ O ₄	430	10	1 M KOH	138
(FeCoNiCrMn) ₃ O ₄	275	10	1 M KOH	139
(CoCrFeMnNi) ₃ O ₄	220	10	1 M KOH	140