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Supporting Materials

Benchmarking Perovskite Electrocatalysts' OER Activity as Candidate Materials for Industrial Alkaline Water Electrolysis

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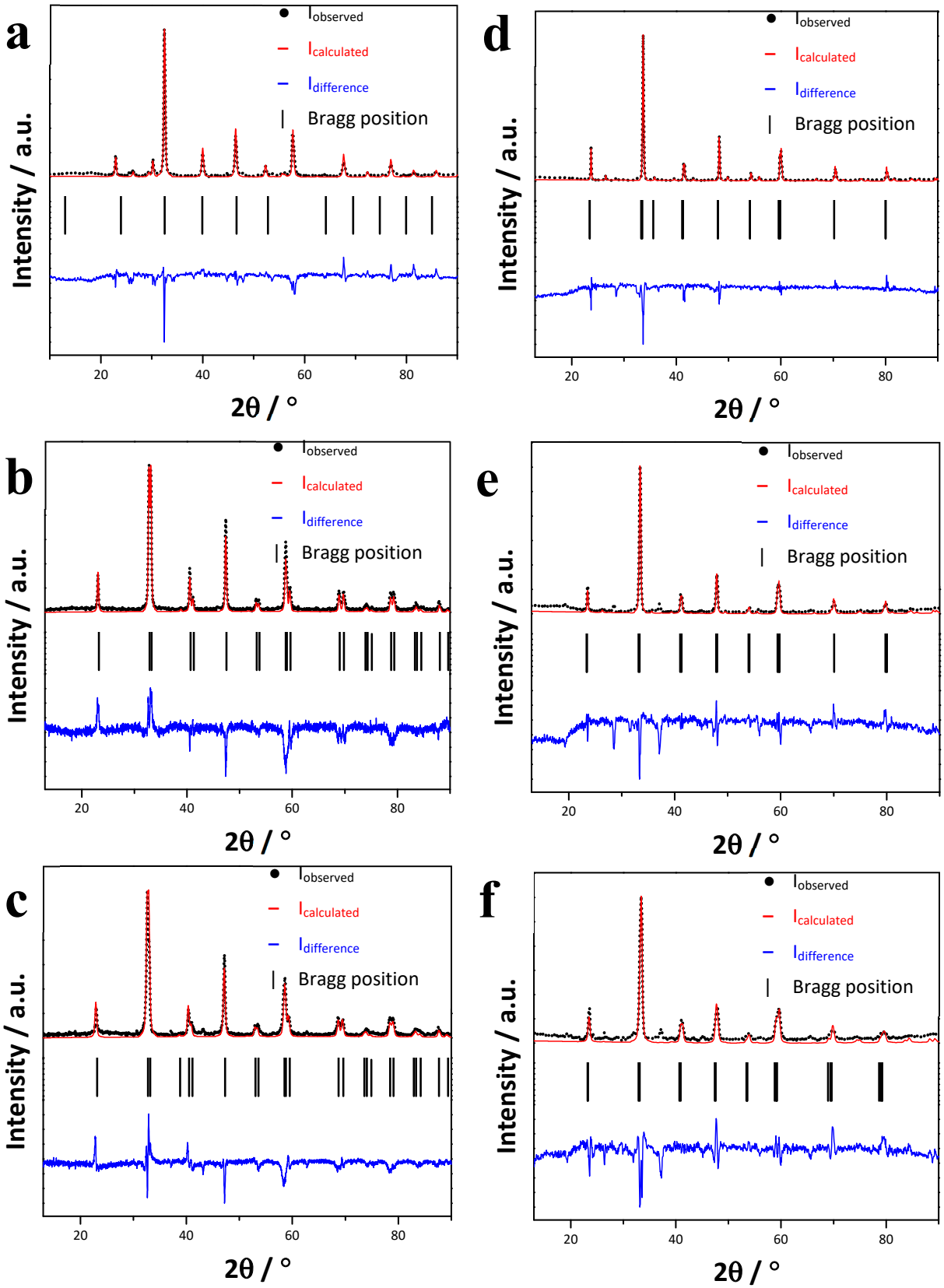

Figure S1. Rietveld refinement of XRD patterns of (a) $LaFeO_3$, (b) $LaCoO_3$, (c) $LaNiO_3$, (d) $PrCoO_3$, (e) $Pr_{0.8}Sr_{0.2}CoO_3$, and (f) $Pr_{0.8}Ba_{0.2}CoO_3$.

Table S1. Chemical composition of the prepared ABO_3 perovskites in at.% as obtained from the EDX analysis. The error enclosed in parenthesis is given as ± 1σ in at.%.

	A / at.%	B / at.%	O / at.%	A/B ratio
$LaFeO_3$	24 (1)	23 (2)	54 (3)	1.0
$LaCoO_3$	22 (1)	22 (2)	57 (3)	1.0
$LaNiO_3$	22 (2)	22 (2)	56 (4)	1.1
$PrCoO_3$	27.2 (0.4)	25.6 (0.4)	47.2 (0.8)	1.1
$Pr_{0.8}Sr_{0.2}CoO_3$	Pr: 13 (1) Sr: 3.4 (0.5)	25 (2)	59 (3)	0.7
$Pr_{0.8}Ba_{0.2}CoO_3$	Pr: 14 (2) Ba: 3.3 (0.7)	26 (4)	57 (5)	0.7

Table S2. Comparison of the electrochemical activity of the perovskites in alkaline environment (0.1 M KOH, room temperature).

	Overpotential at 1 mA cm^{-2} / V vs RHE	Tafel slope / mV dec^{-1}
$LaFeO_3$	0.65	100
$LaCoO_3$	0.50	90
$LaNiO_3$	0.46	68
$PrCoO_3$	0.50	81
$Pr_{0.8}Sr_{0.2}CoO_3$	0.43	69
$Pr_{0.8}Ba_{0.2}CoO_3$	0.46	69