Supporting Information

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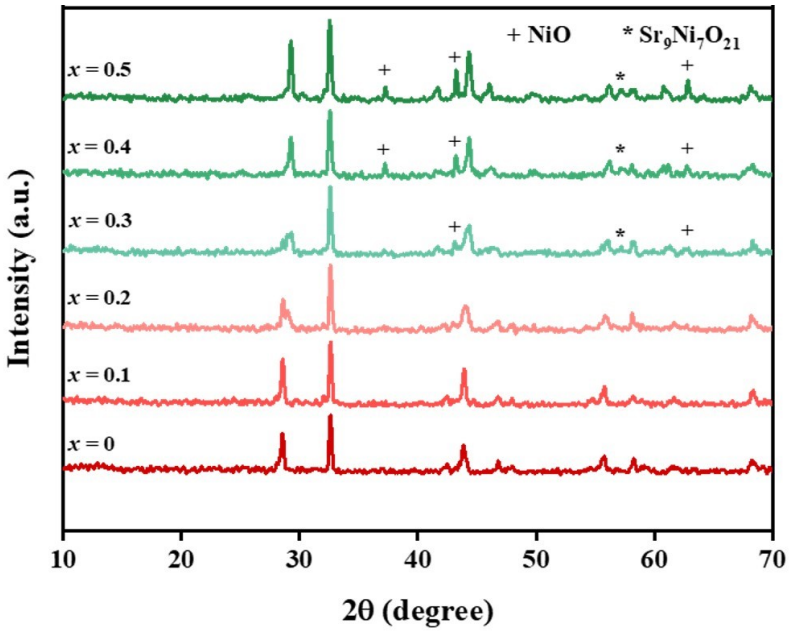

Figure S1. XRD patterns of SCN*x*O10 (*x* = 0-0.5) series catalysts.

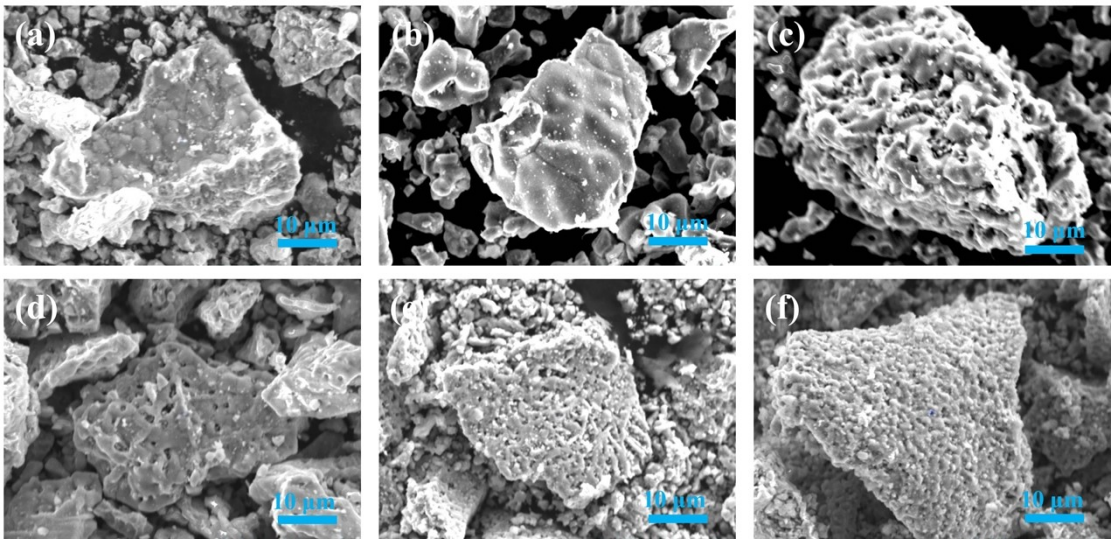

Figure S2. SEM images of SCN*x*O10 series catalysts, (a) *x* = 0, (b) *x* = 0.1, (c) *x* = 0.2, (d) *x* = 0.3, (e) *x* = 0.4, (f) *x* = 0.5.

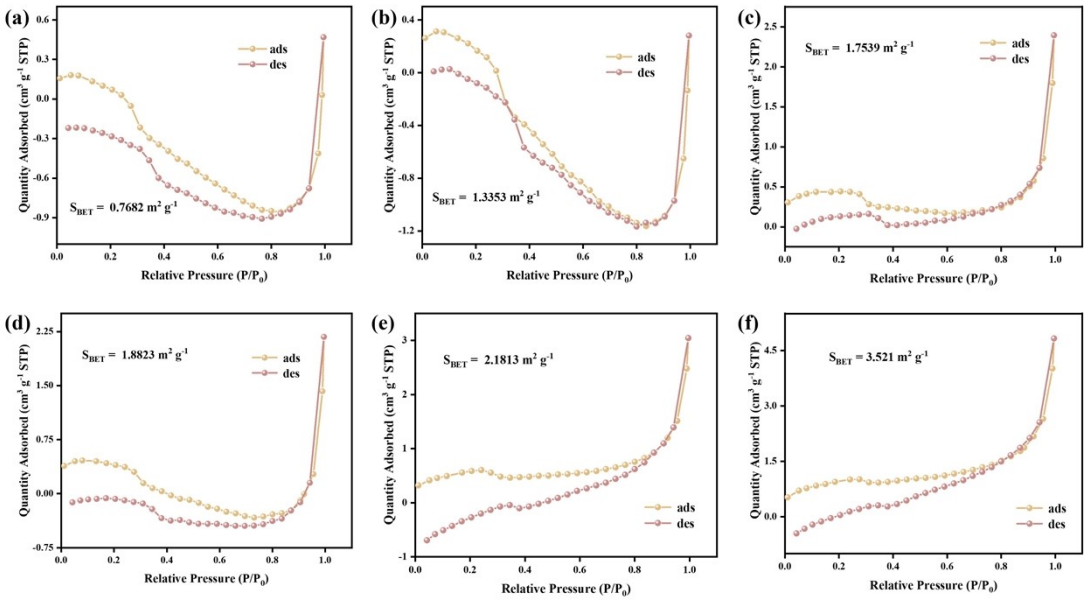

Figure S3. Nitrogen adsorption-desorption isotherms of SCN*x*O9 series catalysts, (a) *x* = 0, (b) *x* = 0.1, (c) *x* = 0.2, (d) *x* = 0.3, (e) *x* = 0.4, (f) *x* = 0.5. The non-coincidence of adsorption and desorption curves may be caused by the small specific surface area of the sample or the particularity of the pore structure.

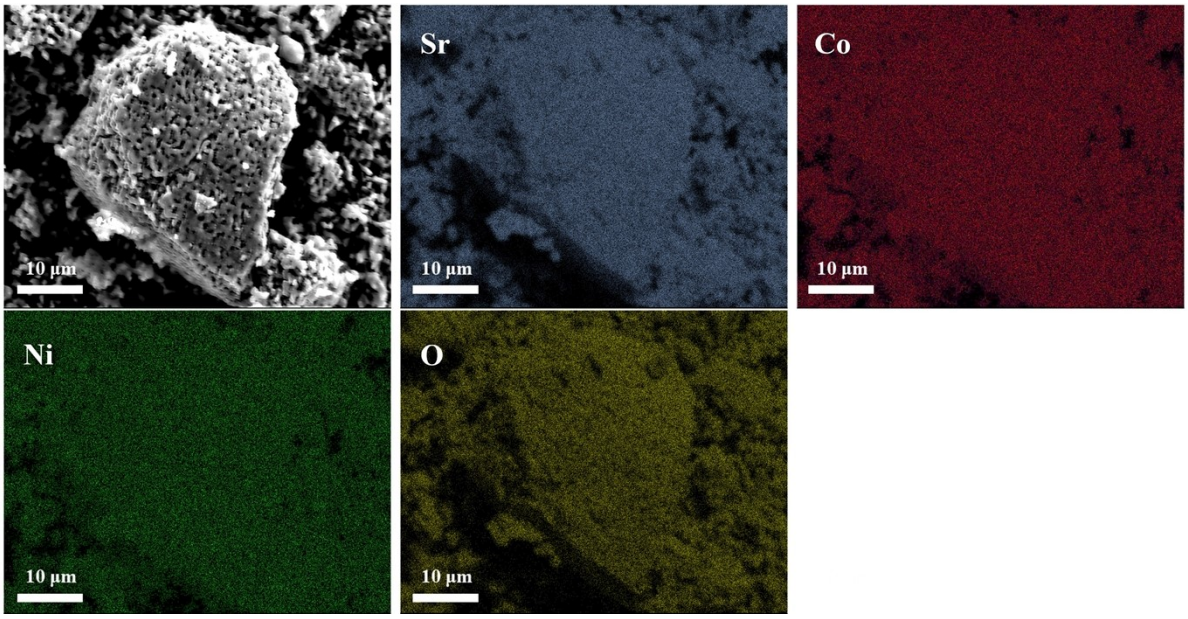

Figure S4. SEM images and EDS mapping of SCN0.4O9.

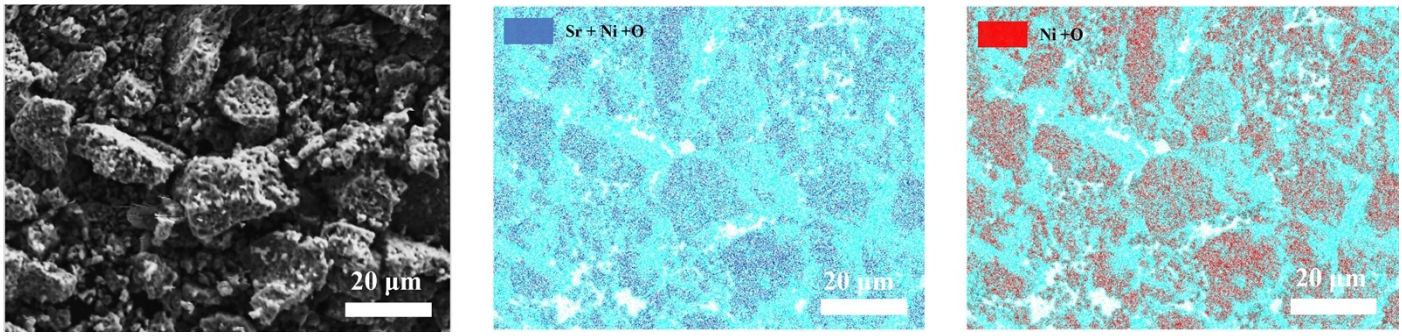

Figure S5. WDS mapping of SCN0.4O9. The regions where Sr, Ni, and O maps co-locate are indicative of the SNO distribution, marked in dark blue; The regions where only Ni and O maps co-locate represent the NiO distribution, marked in red.

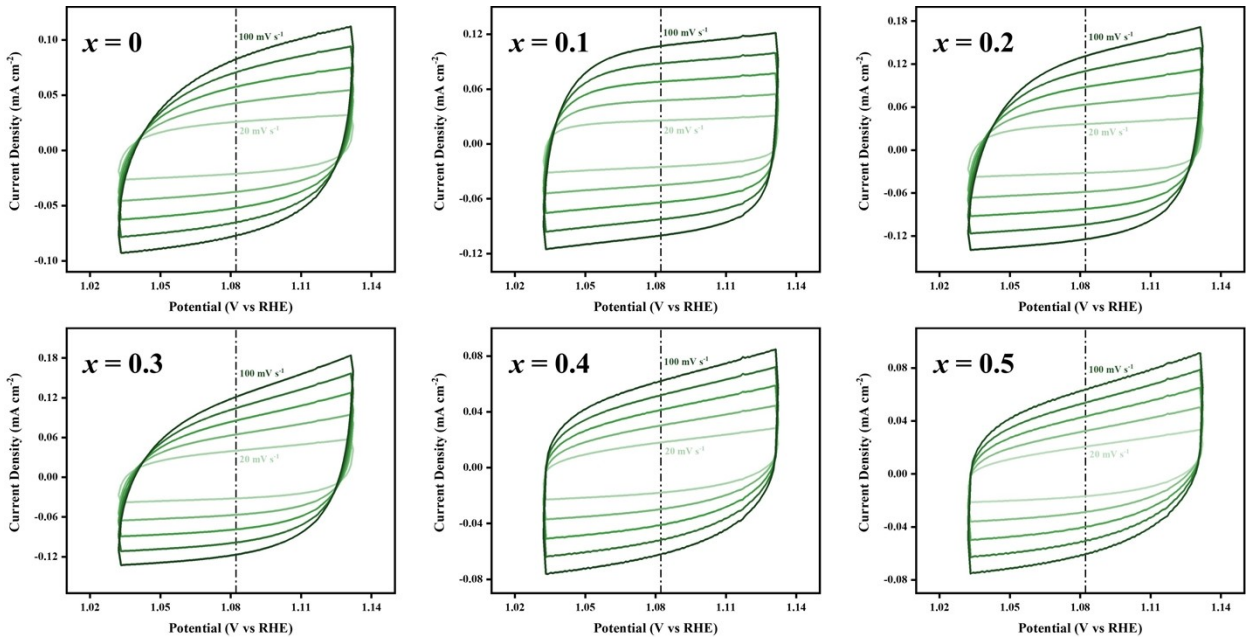

Figure S6. CV tests of SCN*x*O9 (*x* = 0-0.5) series catalyst at different scanning rates at 0.12-0.22 V (vs Hg/HgO).

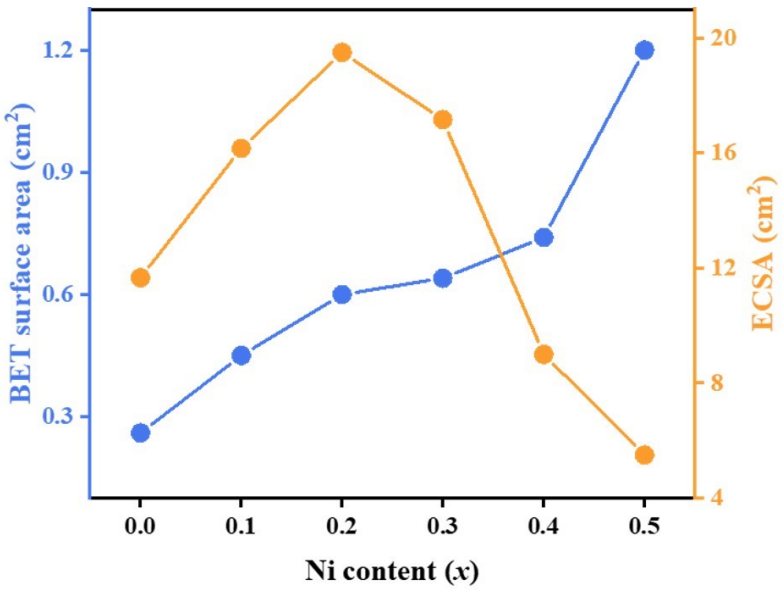

Figure S7. BET surface area and ECSA of SCN*x*O9 (*x* = 0-0.5) series catalyst (based on catalyst load).

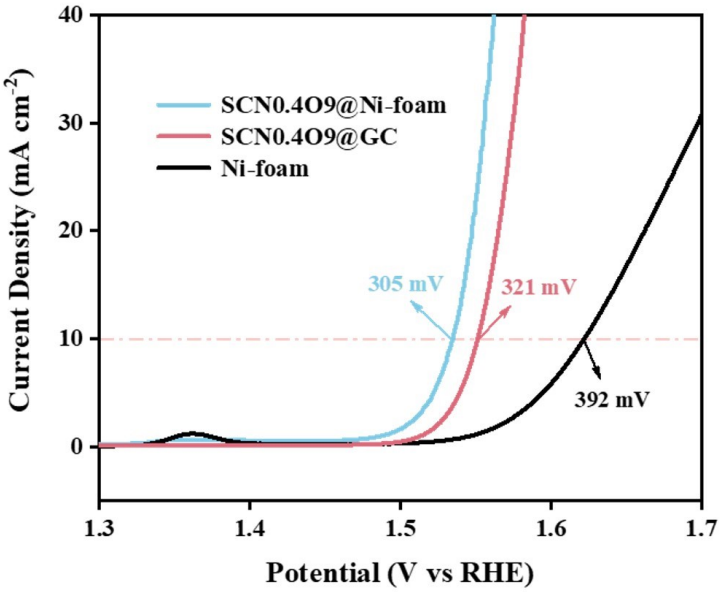

Figure S8 The LSV curves of Ni-foam loaded with SCN0.4O9, GC coated with SCN0.4O9, and pristine Ni-foam.

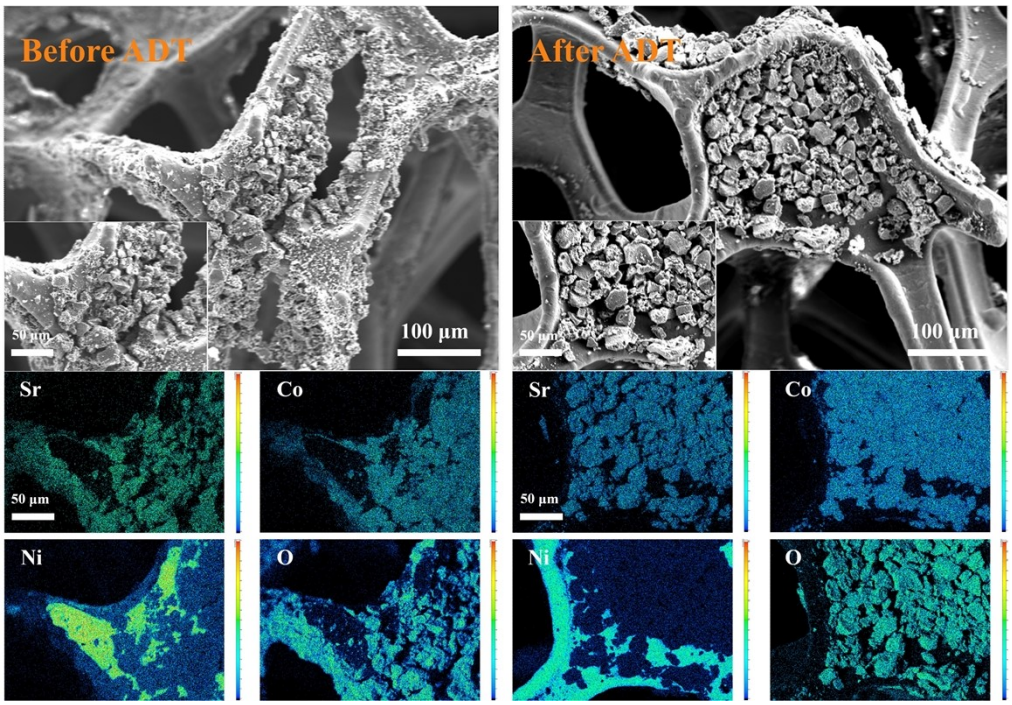

Figure S9. SEM images and WDS mappings of Ni-foam electrode loaded with SCN0.4O9 before and after ADT.

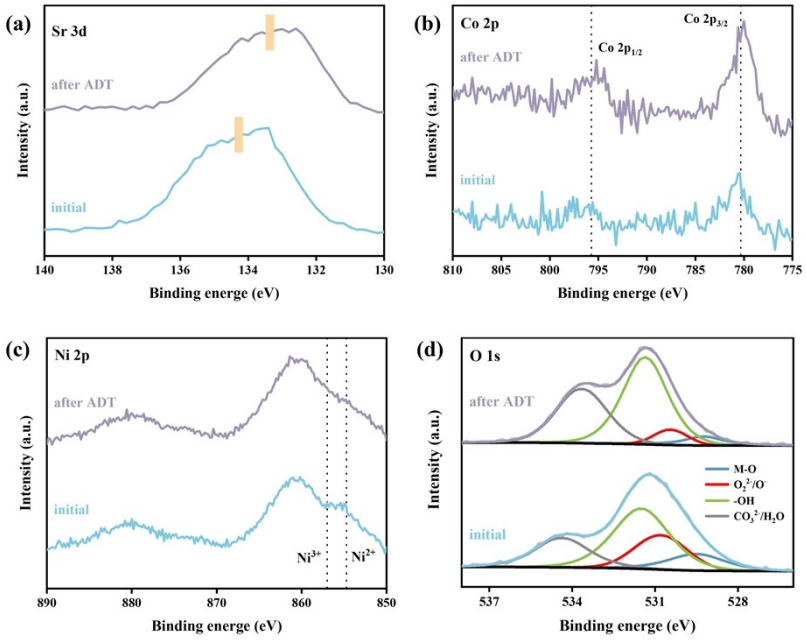

Figure S10 XPS spectra of SCN0.4O9 before and after ADT: (a) Sr 3d, (b) Co 2p, (c) Ni 2p, (d) O 1s.

Table S1. Comparison of OER performances for SCN0.4O9 with recently reported perovskite oxide electrocatalysts in 1.0 M KOH.

Catalyst	η @ 10 mA cm^{-2} (mV)	Catalyst loading (mg cm^{-2})	Substrate	Reference
$SrCo_{1-y}Ni_yO_{3-\delta}/Sr_9Ni_7O_{21}$	321	0.17	Glassy carbon (GC)	This work
$Sr_2Co_{1.5}Fe_{0.5}O_{6-\delta}$	318	2	carbon cloth	ACS Catal. 2021, 11, 4327−4337
$SrCo_{0.8}Fe_{0.5-x}O_{3-\delta}/Fe_xO_y$	352	0.24	GC	ACS Appl. Mater. Inter. 2021, 13, 17439−17449
$LaCoO_3$	470	0.2	GC	Chem. 2017, 3, 812–821
$La_{0.8}Sr_{0.2}Co_{0.8}Fe_{0.2}O_{3-\delta}$	365	0.24	GC	ACS Appl. Mater. Inter. 2019, 11, 47858
$SrCoO_3$	290	0.25	GC	Sci. Adv. 2019, 5, eaav6262
$LaNiO_3$	430	0.19	GC	Int. J. Hydrogen Energy 87 2024 890-901
La_2NiMnO_6	370	0.1	GC	J. Am. Chem. Soc. 2018, 140, 11165
$LaNi_{0.8}Fe_{0.2}O_{3-\delta}$	302	0.40	GC	Angew. Chem., Int. Ed. 2019, 58, 2316-2320
$Ag/LaNiO_3$	315	0.24	GC	ACS Appl. Energy Mater. 2022, 5, 14658−14668