Electronic Supplementary Material (ESI) for Green Chemistry.

Iron-containing N-doped carbon electrocatalysts for the cogeneration of hydroxylamine and electricity in a NO-H_2 fuel cell.

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Supporting information

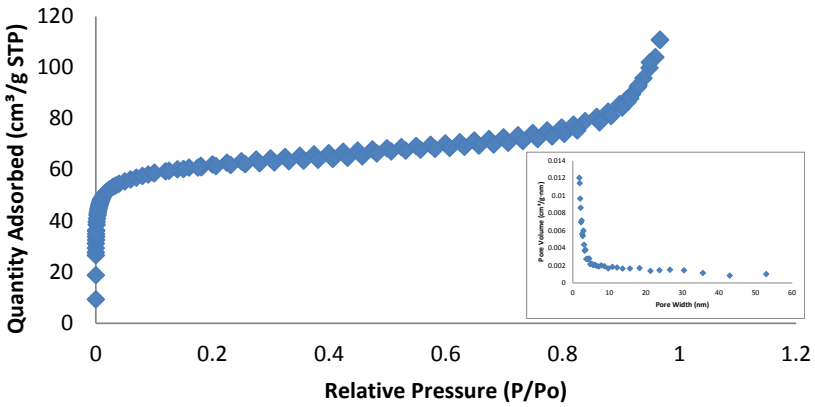

Figure S1. N_2 adsorption isotherm and pore size distribution (inset) of Fe-PANI-AC-2.

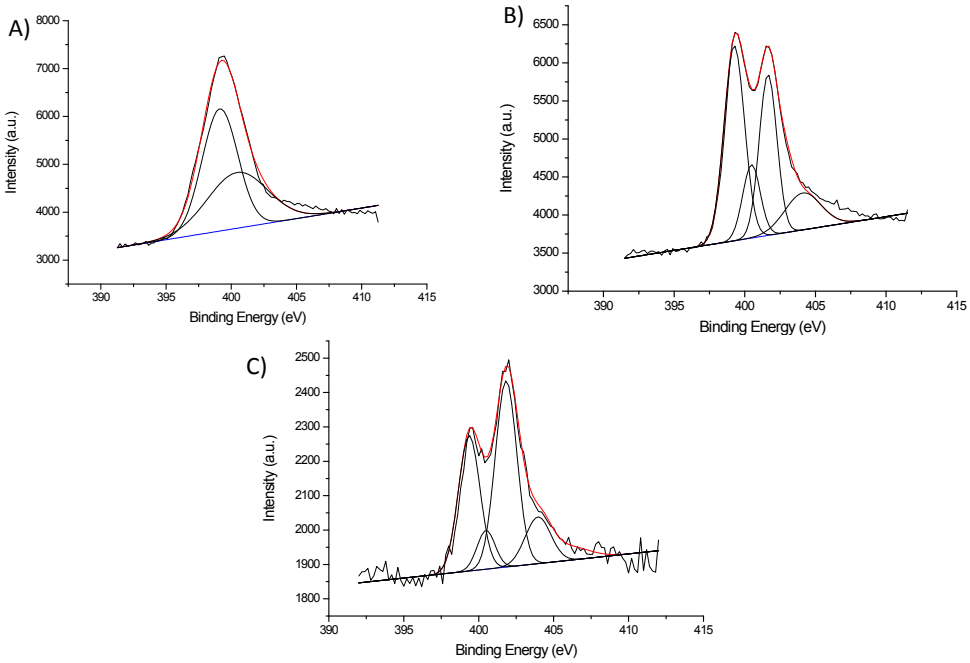

Figure S2. Deconvoluted N 1s XPS spectra of (A) Fe-PANI-AC-1 400°C, (B) Fe-PANI-AC -1 (700°C) and (C) Fe-PANI-AC-2 (900°C).

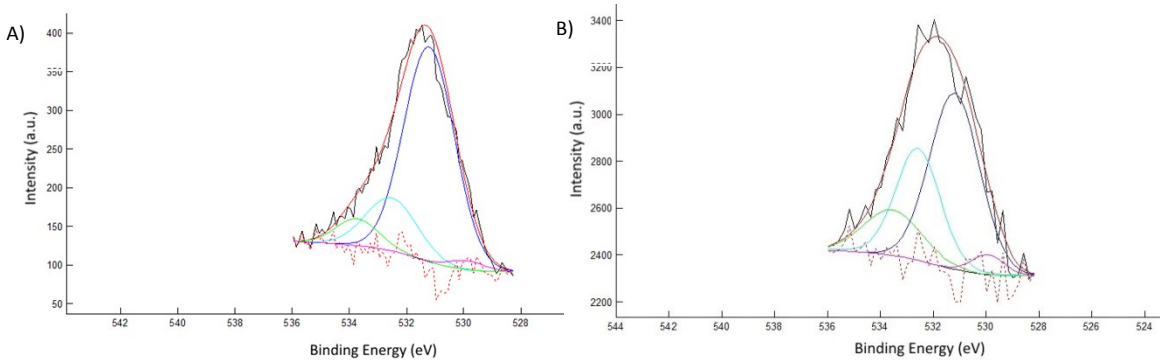

Figure S3. Deconvoluted O 1s XPS spectra of (A) Fe-PANI-AC-1 and (B) Fe-PANI-AC-2.

Table S1. O configurations in the Fe-PANI-AC materials.

Sample	Fe-O (530.0 eV)	C-O (531.5 eV)	C=O (532.6 eV)	O-C=O (533.8 eV)
Fe-PANI-AC-1	2.1%	72%	18%	7.6%
Fe-PANI-AC-2	3.7%	51%	30%	15%

Table S2. Relative abundance of iron species in Fe-PANI-AC-1 and -2, as determined by analysis of the negative secondary ions by ToF-SIMS.

	Fe-PANI-AC-1	Fe-PANI-AC-2
$FeNC^-$	2.8%	2.6%
FeO_2^-	5.7%	14%
FeO_2H^-	2.6%	6.7%
$FeNC_2^-$	1.6%	1.1%
FeN_2C^-	3.9%	9.6%
FeO_3^-	4.6%	12%
FeO_3H^-	3.5%	10%
$FeNC_3^-$	17%	7.0%
$FeN_2C_2^-$	15%	5.1%
FeN_3C^-	0.8%	0.5%
$FeN_2C_3^-$	3.5%	4.8%
$FeN_3C_2^-$	2.0%	1.5%
FeN_4C^-	0.9%	0.4%
$FeN_2C_4^-$	4.3%	2.1%
$FeN_3C_3^-$	7.6%	1.5%
$FeN_4C_2^-$	2.7%	8.7%
$FeN_2C_5^-$	2.5%	1.8%
$FeN_3C_4^-$	2.2%	1.4%
$FeN_4C_3^-$	0.5%	0.5%
$FeN_2C_6^-$	1.8%	1.2%
$FeN_3C_5^-$	3.9%	1.4%
$FeN_4C_4^-$	0.9%	0.3%
$FeN_3C_6^-$	1.8%	0.9%
$FeN_4C_5^-$	0.5%	0.3%
$FeN_3C_7^-$	1.2%	0.3%
$FeN_4C_6^-$	1.0%	0.3%
$FeN_3C_8^-$	1.3%	0.5%
$FeN_4C_7^-$	0.7%	1.6%
$FeN_3C_9^-$	0.8%	0.2%
$FeN_4C_8^-$	0.8%	0.3%
$FeN_4C_9^-$	0.1%	0.1%
$FeN_4C_{10}^-$	0.6%	0.1%
$FeN_4C_{11}^-$	0.3%	0.2%
$FeN_4C_{12}^-$	0.4%	0.5%