

Experiment	EGC1	
Start date	Aug 17, 2021	
Cell/electrode	Ni-BZCY Protonic type	
Tube	402	
Length	5.2 cm	
Area	15.02 cm ²	
Setup	Single Cell+washer+IC cap	

Feed channel (Inside)									Sweep channel (Outside)										
P (bar a)	F_H2O (mg/min)	F_N2 (SSCM)	F_He (SSCM)	F_H2 (SSCM)	F_Harmix2%(SSCM)	H2 GC (%) - OCV	N2 or He GC - OCV (%)	H2 GC at 50 mA/cm2 (%)	P (bar a)	F_H2O (mg/min)	F_N2 (SSCM)	F_H2 (SSCM)	F_Harmix2%(SSCM)	H2 GC - OCV (%)	N2 or He GC- OCV (%)	H2 GC - 50 mA/cm2 (%)	Compression ratio at 50 mA/cm2	U at 50 mA/cm2 (mV)	
10.1	20	0	0	100	0	N/A	N/A	N/A	9.9	20.0	0	100	0	N/A	N/A	N/A	1.0	44	
10.1	20	0	328	82	0	19.7	N/A	19.0	9.9	20.0	0	100	0	N/A	6.9	N/A	4.1	114	
10.1	20	475	0	25	0	3.2	N/A	2.0	9.9	20.0	0	100	0	N/A	N/A	N/A	31.9	249	
10.1	20	0	0	0	425	1.9	N/A	1.1	9.9	20.0	0	100	0	N/A	N/A	N/A	54.6	326	
9.8	20	0	0	100	0	N/A	2.3	N/A	10.1	20.0	80	80	0	50.0	N/A	51.8	0.59	23	
9.8	20	0	0	100	0	N/A	3.3	N/A	10.1	20.0	320	80	0	26.0	N/A	27.4	0.34	-2	
9.9	20	0	0	100	0	N/A	6.7	N/A	10.3	20.0	450	50	0	14.8	N/A	16.2	0.21	-26	
9.9	20	0	0	100	0	N/A	6.0	N/A	10.3	20.0	456	24	0	8.5	N/A	9.5	0.12	-47	
9.9	20	0	0	100	0	N/A	5.9	N/A	10.4	20.0	450	0	0	3.7	N/A	5.2	0.06	-80	
9.9	20	0	5	95	0	N/A	N/A	N/A	10.4	20.0	0	0	400	0.9	N/A	2.5	0.02	-109	

Experiment	EGC2	
Start date	Sept 7, 2021	
Cell/electrode	Ni-BZCY Protonic type	
Tube	398	
Length	5.2 cm	
Area	15.02 cm ²	
Setup	Single Cell+washer+IC cap	

Feed channel (Inside)									Sweep channel (Outside)										
P (bar a)	F_H2O (mg/min)	F_N2 (SSCM)	F_He (SSCM)	F_H2 (SSCM)	F_Harmix2%(SSCM)	H2 GC at OCV (%)	N2 GC at OCV (%)	H2 GC at 50 mA/cm2 (%)	P (bar a)	F_H2O (mg/min)	F_N2 (SSCM)	F_H2 (SSCM)	F_Harmix2%(SSCM)	H2 GC - OCV (%)	N2 or He GC- OCV (%)	H2 GC - 50 mA/cm2 (%)	Compression ratio at 50 mA/cm2	U at 50 mA/cm2 (mV)	
19.1	20	362	0	0	0	2.8	N/A	1.7	19.0	20	0	200	0	N/A	5.6	N/A	41.4	222.7	
19.1	20	453	0	20	0	9.2	N/A	7.7	19.0	20	0	200	0	N/A	5.2	N/A	10.3	146.7	
19.1	20	408	0	25	0	11.2	N/A	10.3	19.0	20	0	200	0	N/A	5.3	N/A	7.8	135.7	
19.1	20	290	0	80	0	25.8	N/A	24.7	19.0	20	0	200	0	N/A	4.7	N/A	2.9	93.7	
19.0	20	0	0	200	0	N/A	N/A	N/A	19.0	20	0	200	0	N/A	N/A	N/A	1.0	34.2	
19.0	20	0	0	200	0	N/A	6.3	N/A	19.0	20	362	0	0	2.0	N/A	3.20	0.03	-136.6	
19.0	20	0	0	200	0	N/A	6.6	N/A	19.0	20	444	10	0	4.6	N/A	6.10	0.07	-91.3	
19.0	20	0	0	200	0	N/A	6.4	N/A	19.0	20	430	25	0	8.2	N/A	9.50	0.11	-67.3	
19.0	20	0	0	200	0	N/A	6.6	N/A	19.0	20	408	50	0	12.6	N/A	14.97	0.19	-42.3	
19.0	20	0	0	200	0	N/A	6.1	N/A	19.0	20	290	80	0	23.0	N/A	25.29	0.37	-18.3	
35.0	15	0	0	200	0	N/A	N/A	N/A	35.0	15	0	200	0	N/A	N/A	N/A	1.00	37.8	
35.1	15	290	0	80	0	30.2	N/A	27.9	35.0	15	0	200	0	N/A	8.4	N/A	2.45	93.5	
35.1	15	430	0	25	0	16.1	N/A	N/A	35.0	15	0	200	0	N/A	10.1	N/A	5.17	127.5	
35.1	15	381	0	0	0	6.9	N/A	5.9	35.0	15	0	200	0	N/A	11.0	N/A	13.18	162.5	
35.1	20	387	0	0	0	2.1	N/A	0.8	35.0	15	0	300	0	N/A	14.0	N/A	51.38	292.5	