

Supporting Information

Hydrogen Production by Electrochemical Reaction Using Ethylene Glycol with Terephthalic

Acid

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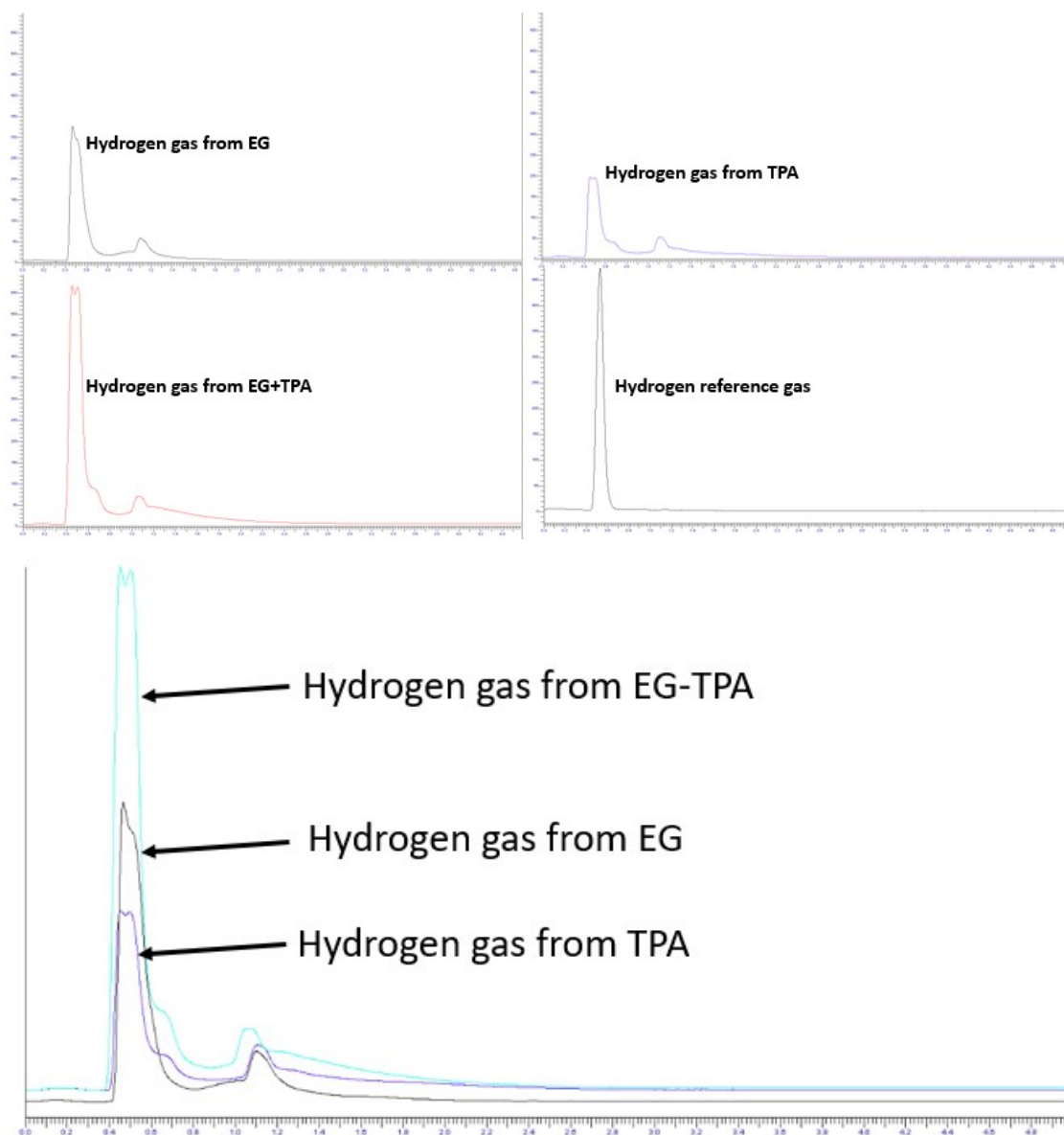


Fig. S1. EG 1.0M and TPA 10 mM chromatograms in 0.1 M aqueous KOH solution at 1.6 V

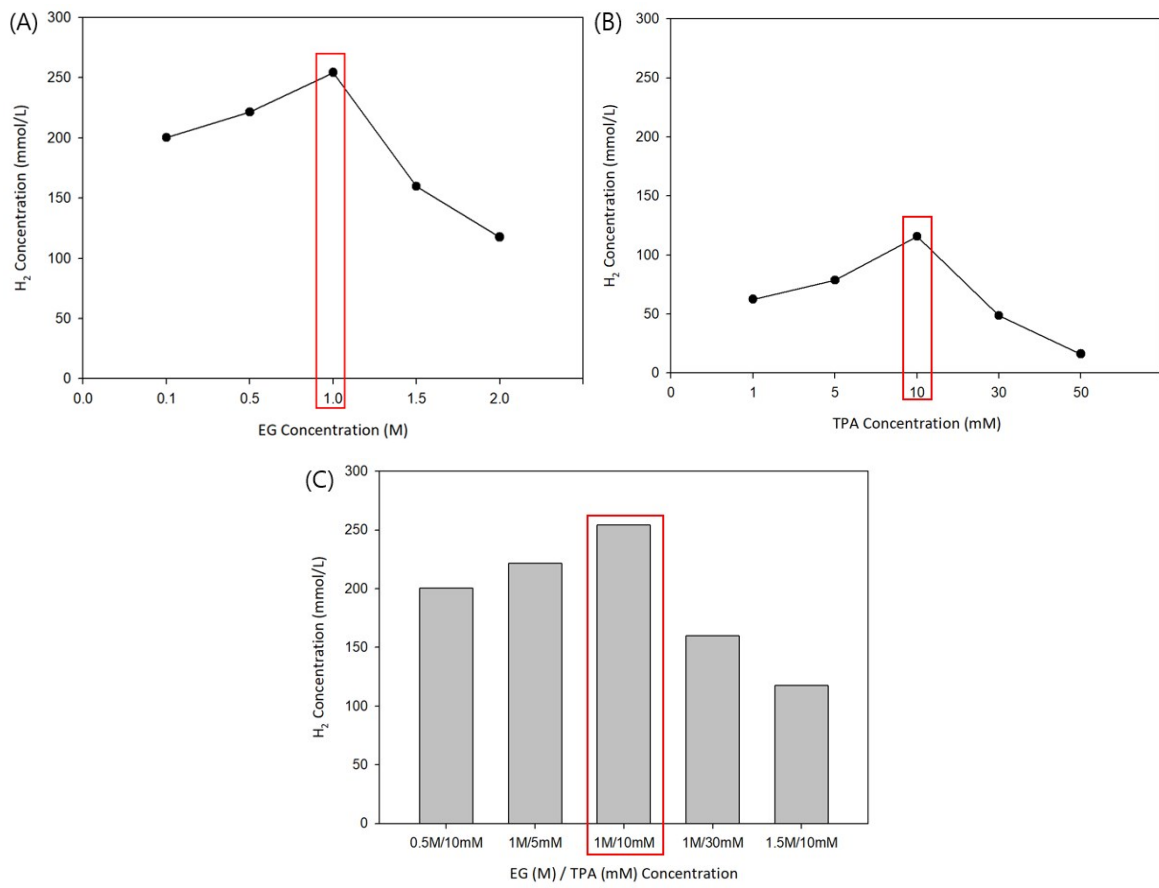


Fig. S2. The amount of hydrogen produced rate according to the concentration of EG and TPA at 0.1M KOH capacity at 1.6V in (A) EG, (B) TPA, (C) EG-TPA

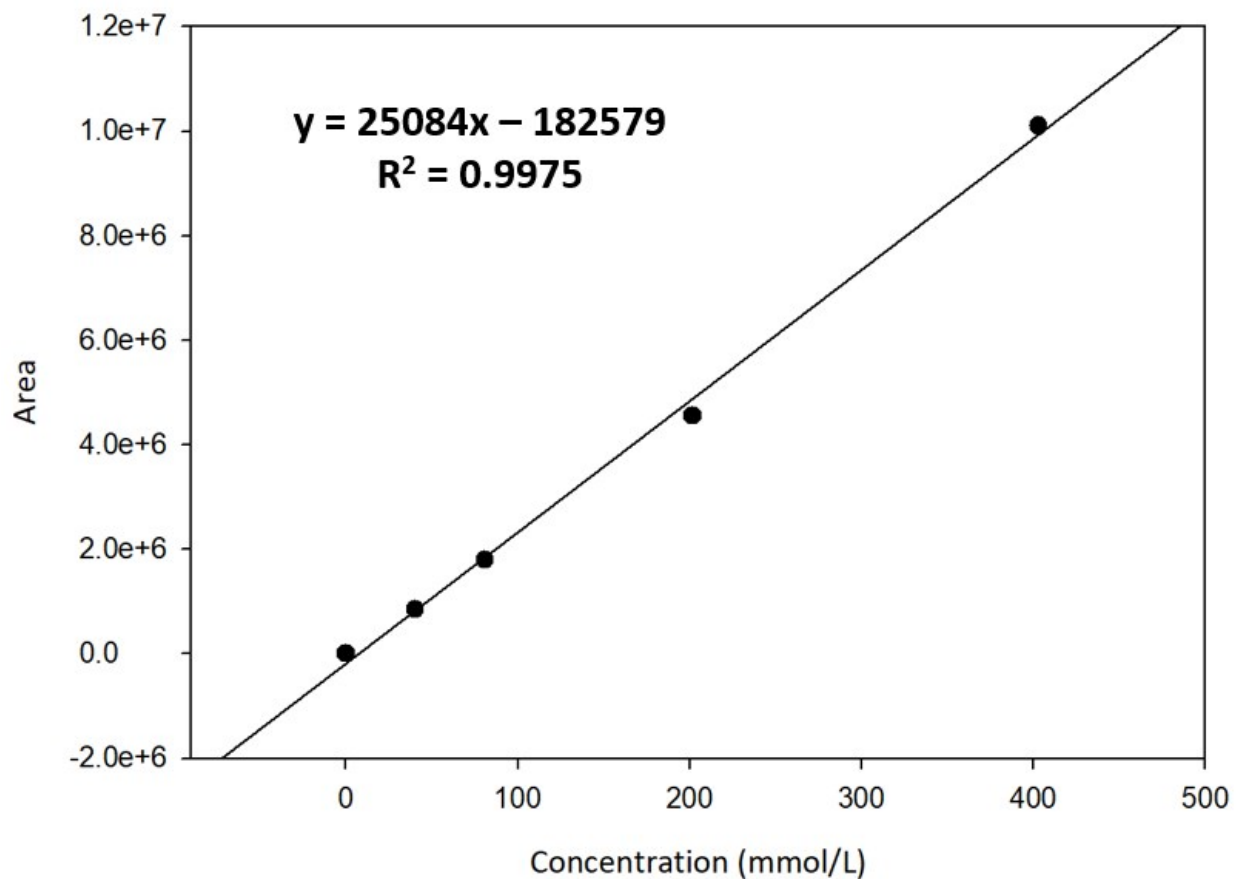


Fig. S3. Calibration curve for hydrogen generation analysis for EG and TPA

Table S1. Original quantification data corresponding to Fig. 6(a)

Time	Area	Con(mmol/L)
None(30min)	757794.841	38.179
45min	1355346.925	62.272
60min	1740133.631	77.787
75min	1795026.984	80.000
90min	1795959.524	80.038
105min	1857030.952	82.500
120min	1919034.921	85.000
EG(30min)	3420525.496	145.540
45min	4008112.302	169.232
60min	4595699.107	192.923
75min	4879501.190	204.366

90min	5049312.698	211.213
105min	5107353.373	213.553
120min	5267249.206	220.000
TPA(30min)	1327174.802	61.136
45min	1695820.635	76.000
60min	2017911.409	88.987
75min	2281959.028	99.633
90min	2479374.702	107.593
105min	2553211.508	110.570
120min	2553779.464	110.593
EG+TPA(30min)	3640133.631	154.393
45min	4653831.548	195.267
60min	5649149.008	235.398
75min	6372507.143	264.564
90min	6722095.437	278.659
105min	6756609.325	280.051
120min	6751611.806	279.845

Table S2. Original quantification data corresponding to Fig. 6(b)

Voltage	Area	Con(mmol/L)
None(1.2V)	0	0
1.4V	65565.179	10.268
1.6V	944612.798	45.711
1.8V	3553779.464	150.913
EG(1.2V)	207725.397	16.000
1.4V	1138561.210	53.531
1.6V	2748194.147	118.432
1.8V	6259312.698	260.000
TPA(1.2V)	0	0
1.4V	258404.960	18.043
1.6V	1948442.163	86.186
1.8V	4823645.536	202.114
EG+TPA(1.2V)	0	0
1.4V	258404.960	18.043
1.6V	1948442.163	86.186
1.8V	4823645.536	202.114