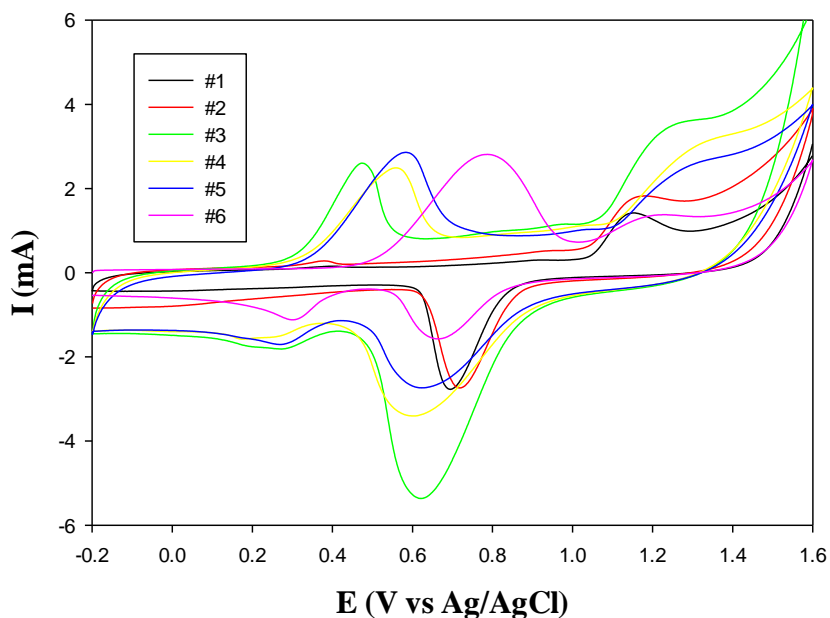


Electronic Supplementary Information

## Electrocatalytic Activity of Alkyne-Functionalized AgAu Alloy Nanoparticles for Oxygen Reduction in Alkaline Media

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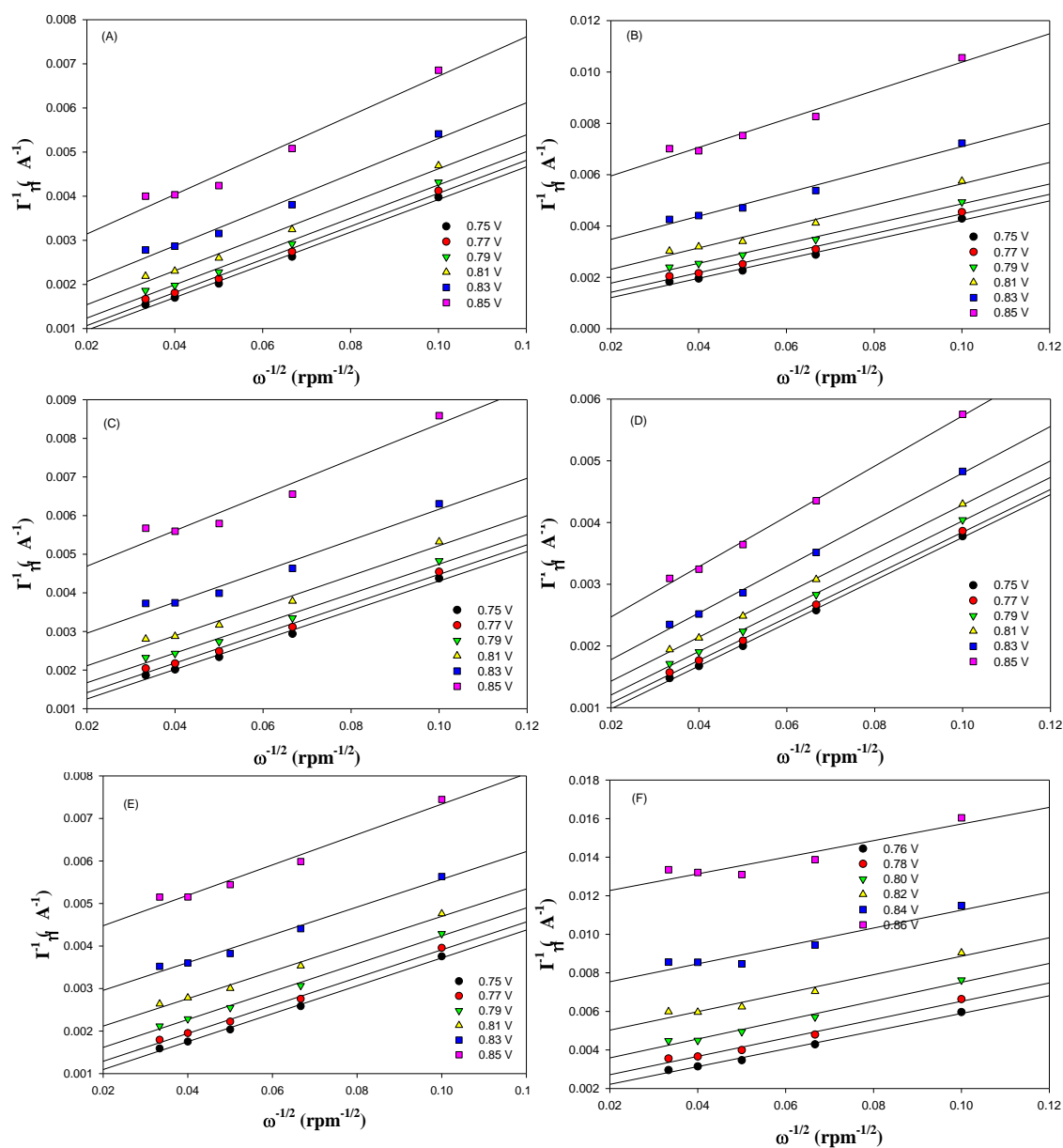
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**Figure S1.** Cyclic voltammograms of glassy carbon electrodes modified with AgAu nanoparticles (same as in Figure 5) in 0.1 M NaOH. The effective electrochemical surface areas as summarized below were determined by oxygen adsorption on Ag ( $210 \mu\text{C}/\text{cm}^2$ ) and Au ( $390 \mu\text{C}/\text{cm}^2$ ), in which the Ag oxidation peaks and gold oxide reduction peaks were used to obtain the amount of charge.<sup>1,2</sup>

Samples	#1	#2	#3	#4	#5	#6
A ( $\text{cm}^2$ )	6.07	5.56	2.46	4.44	4.33	4.04

- (1) Trasatti, S.; Petrii, O. A. *J Electroanal Chem* **1992**, 327, 353.
- (2) Motheo, A. J.; Machado, S. A. S.; Vankampen, M. H.; Santos, J. R. *J Brazil Chem Soc* **1993**, 4, 122.



**Figure S2.** Koutecky-Levich plots of the six AgAu nanoparticles in oxygen-saturated 0.1 M KOH at varied rotation rates (specified in figure legends). Symbols are experimental data from Figure 5 and lines are linear regressions.