Supplementary Material

How Meaningful Are Minor Details in the Generation of Nanomodified Electrochemical Enzyme Biosensors? Exploring the Scenario with Sinusoidal Approaches

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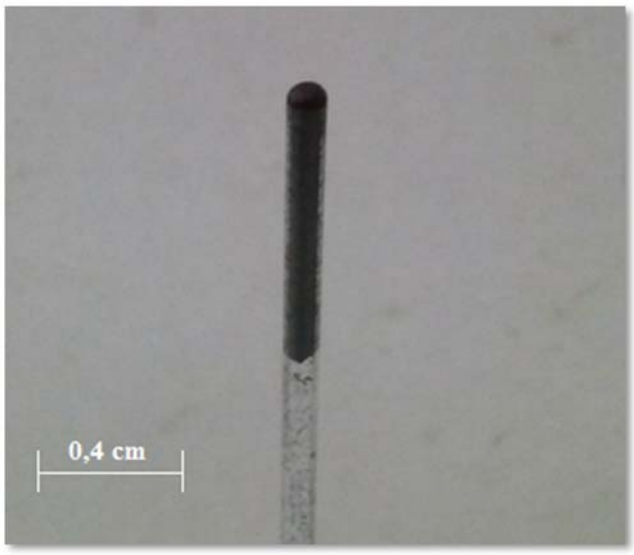
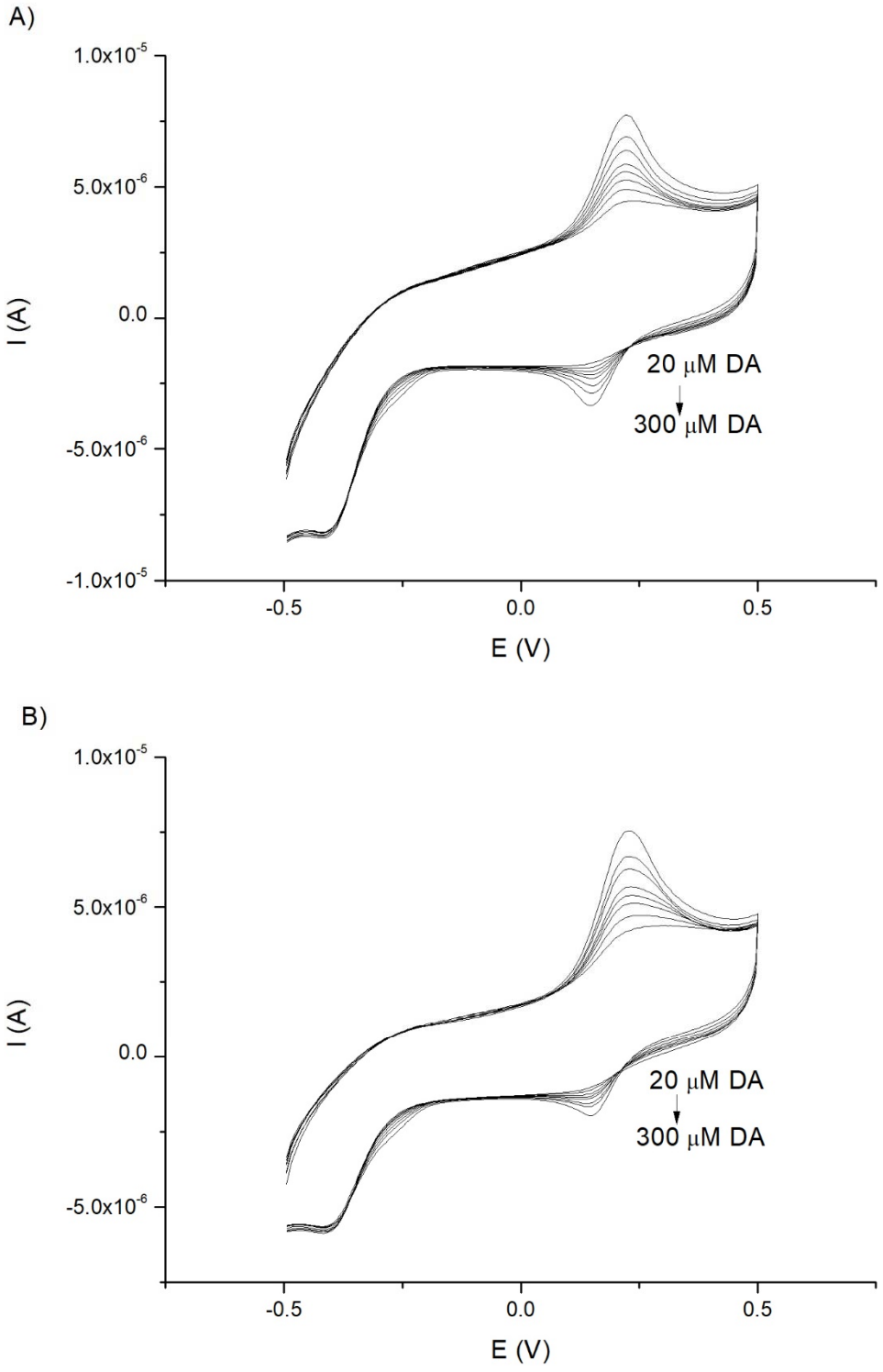


Figure S1. Picture of a tyrosinase and gold nanoparticles-modified SNGC electrode by using drop-casting method.


A)
1.0x10-5
5.0x10-6
0.0
-5.0x10-6
-1.0x10-5
I (A)
20 μM DA
300 μM DA
-0.5
0.0
0.5
E (V)
B)
1.0x10-5
5.0x10-6
0.0
-5.0x10-6
I (A)
20 μM DA
300 μM DA
-0.5
0.0
0.5
E (V)

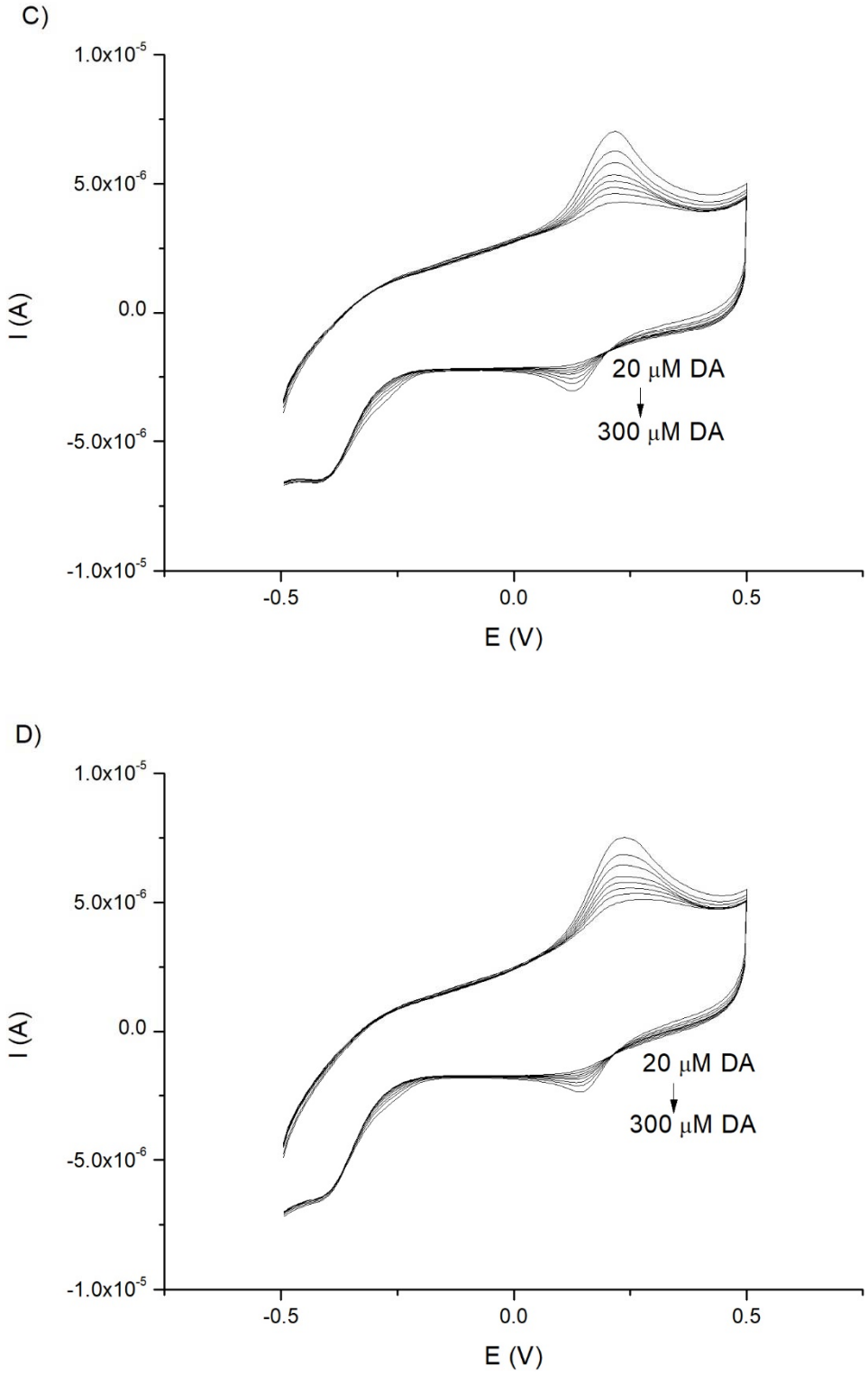
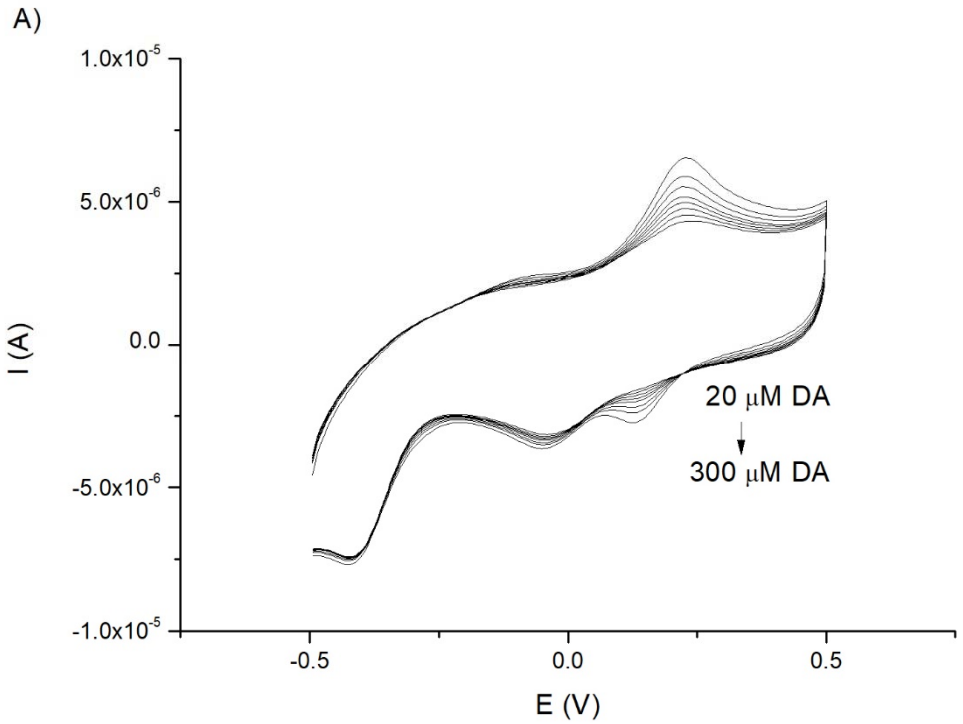
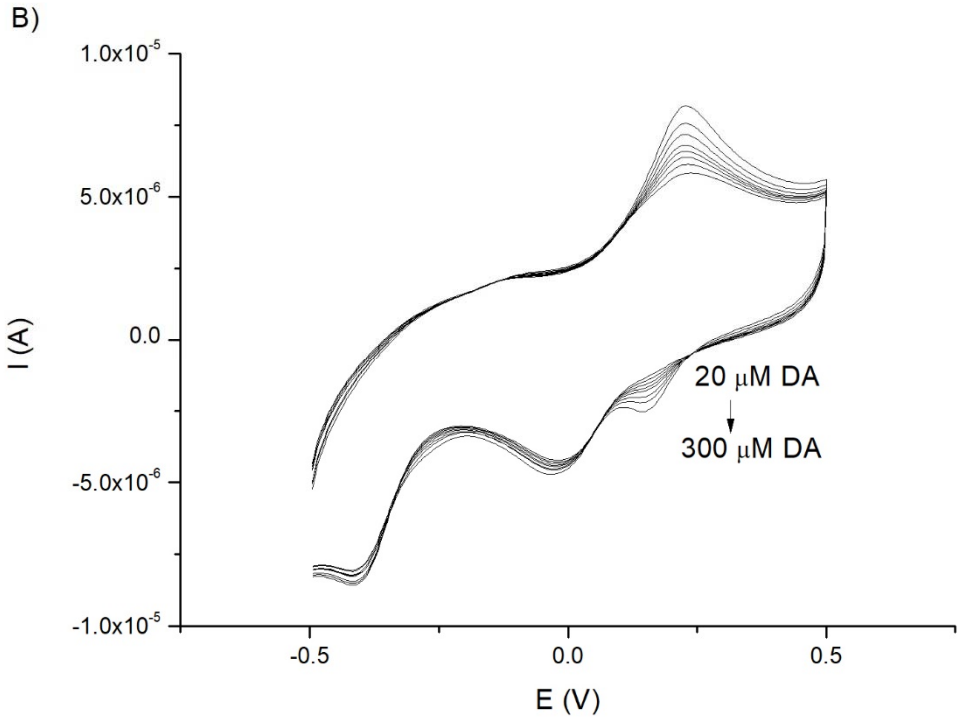


Figure S2. Cyclic voltammograms for the determination of dopamine in presence of different concentrations of AA, using a *SNGC/PEDOT+Tyr-SC* biosensor: (**A**) 500 μM and (**B**) 1000 μM, and a *SNGC/PEDOT+Tyr-SC/AuNPs (drop)* biosensor: (**C**) 500 μM and (**D**) 1000 μM.


A)
1.0x10-5
5.0x10-6
0.0
-5.0x10-6
-1.0x10-5
I (A)
-0.5
0.0
0.5
E (V)
20 μM DA
300 μM DA


B)
1.0x10-5
5.0x10-6
0.0
-5.0x10-6
-1.0x10-5
I (A)
-0.5
0.0
0.5
E (V)
20 μM DA
300 μM DA

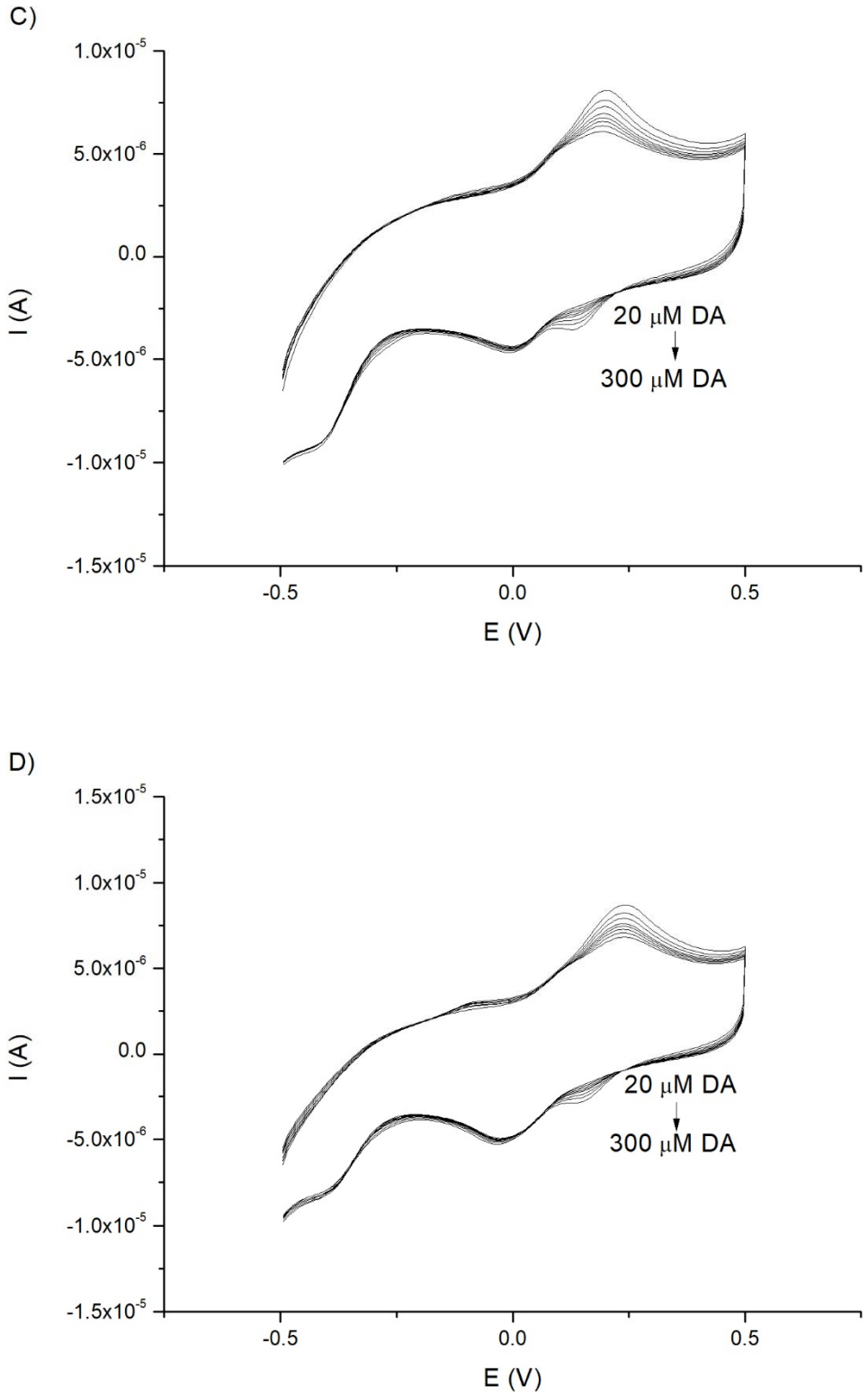
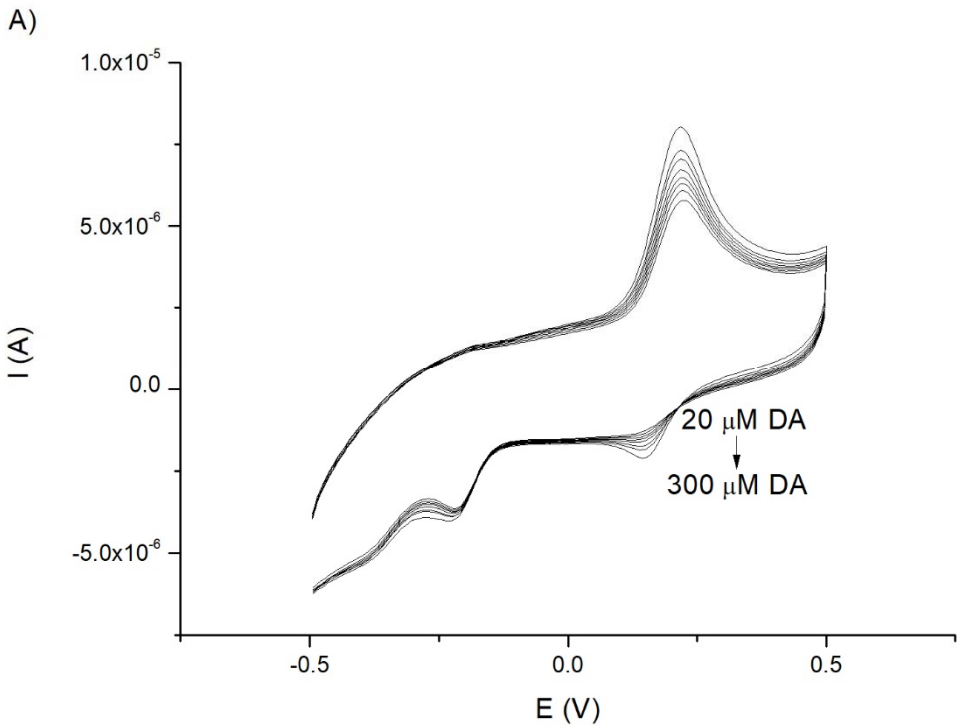
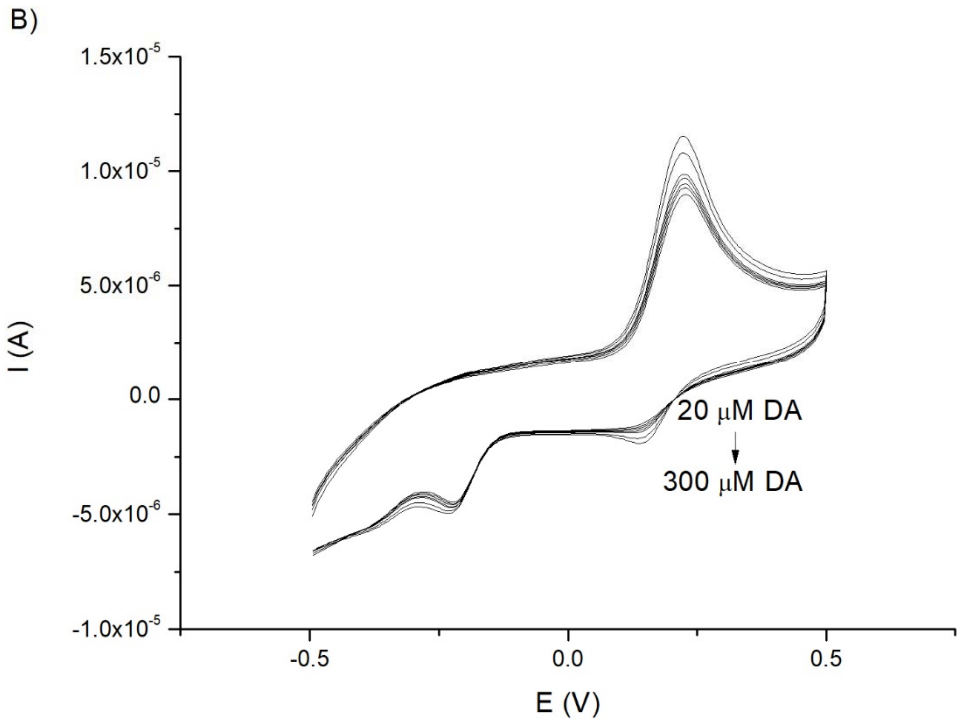


Figure S3. Cyclic voltammograms for the determination of dopamine in presence of different concentrations of HQ, using a *SNGC/PEDOT+Tyr-SC* biosensor: (**A**) 500 μM and (**B**) 1000 μM, and a *SNGC/PEDOT+Tyr-SC/AuNPs (drop)* biosensor: (**C**) 500 μM and (**D**) 1000 μM.


A)
1.0x10-5
5.0x10-6
0.0
-5.0x10-6
I (A)
20 μM DA
300 μM DA
-0.5
0.0
0.5
E (V)


B)
1.5x10-5
1.0x10-5
5.0x10-6
0.0
-5.0x10-6
-1.0x10-5
I (A)
20 μM DA
300 μM DA
-0.5
0.0
0.5
E (V)

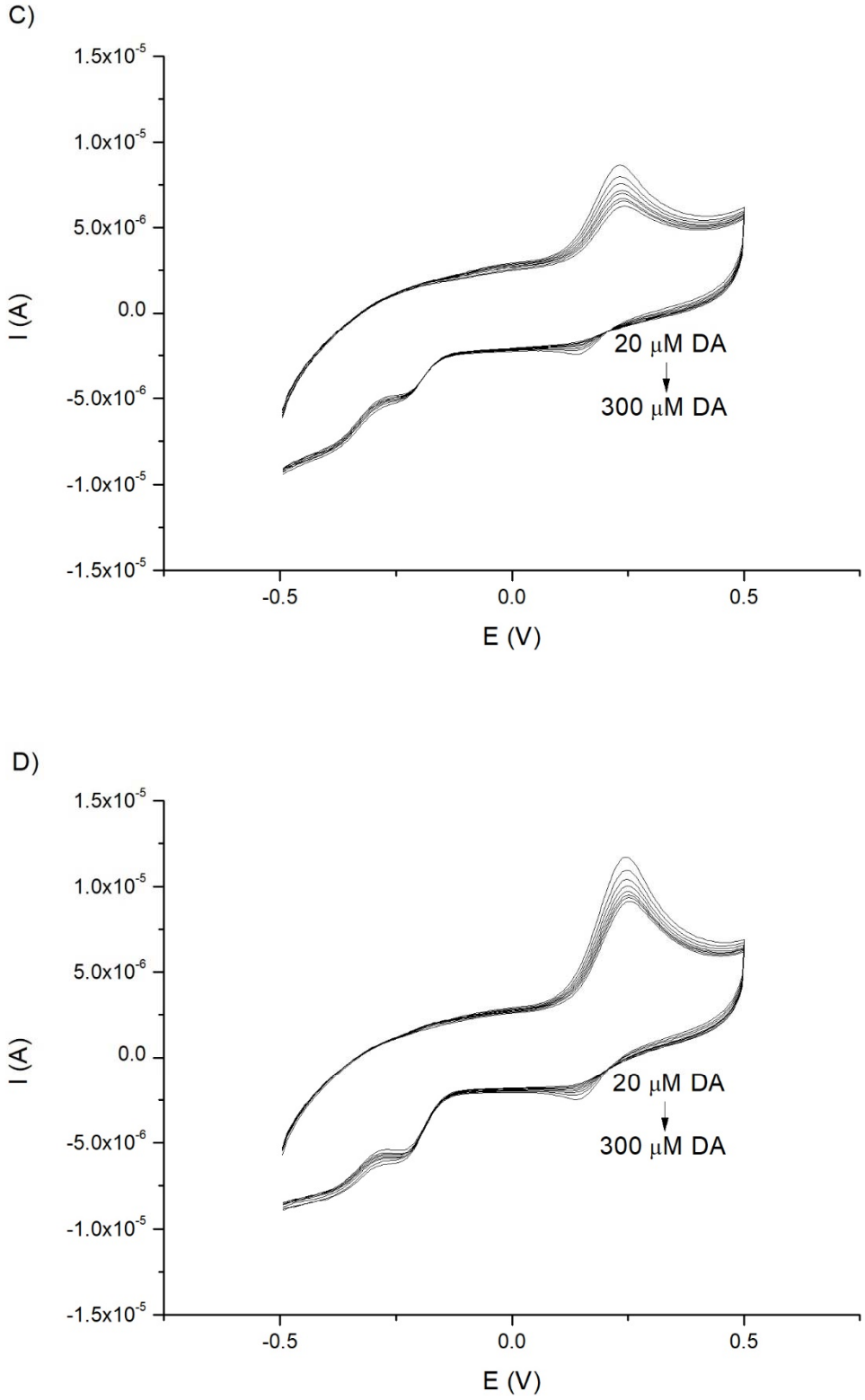


Figure S4. (**A**) Cyclic voltammograms for the determination of dopamine in presence of different concentrations of EPI, using a *SNGC/PEDOT+Tyr-SC* biosensor: (**A**) 500 μM and (**B**) 1000 μM, and a *SNGC/PEDOT+Tyr-SC/AuNPs (drop)* biosensor: (**C**) 500 μM and (**D**) 1000 μM.