

# ChemElectroChem

Supporting Information

## **Electrochemical Behaviour and Sensing of Chlorpromazine at Polymer-Free Kaolin-Based Nanosodalite and Nanosodalite-Graphene Foam Film modified Glassy Carbon Electrodes**

Firmin Parfait Tchoumi, Cyrille Ghislain Fotsop, Guy Bertrand Tamne, Henrietta W. Langmi, Justin Claude Kemmegne-Mbouguen,\* and Emmanuel Ngameni

# Supporting Information

## **Electrochemical Behaviour and Sensing of Chlorpromazine at Polymer-free Kaolin-based Nanosodalite and Nanosodalite-Graphene Foam Film modified Glassy Carbon Electrodes**

**Firmin Parfait Tchoumi<sup>a,b</sup>, Cyrille Ghislain Fotsop<sup>c</sup>, Guy Bertrand Tamne<sup>d</sup>  
Henrietta W. Langmi<sup>e</sup>, Justin Claude Kemmegne-Mbouguen<sup>a\*</sup>, Emmanuel  
Ngameni<sup>b</sup>**

<sup>a</sup>Laboratory of Nanomaterial for Sensors and Energy, Faculty of Science, University of Yaounde 1, P. O. Box 812 Yaounde, Cameroon

<sup>b</sup>*Laboratoire d'Electrochimie et de Génie des Matériaux, Faculté des Sciences, Université de Yaoundé 1, B.P. 812 Yaoundé, Cameroun*

<sup>c</sup>*Otto-von-guericke-University Magdeburg, Chemical Institute Industrial Chemistry, Universitätsplatz 2, 39106 Magdeburg, Germany*

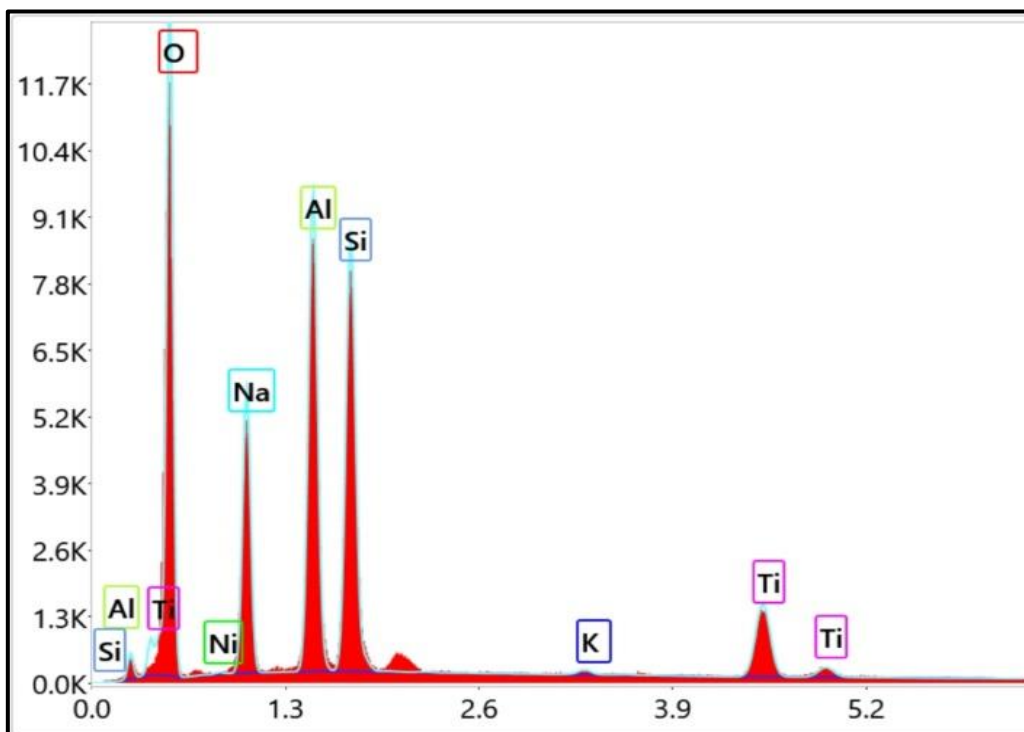
<sup>d</sup>*Department of Chemistry, High Teacher Training College, University of Yaounde 1, P. O. Box 49 Yaounde, Cameroon*

<sup>e</sup>*Department of Chemistry, University of Pretoria, Private Bag, X20, Hatfield, 0028, South Africa*

*\*to whom correspondence should be addressed*

*Email address: [justin.kemmegne@facsciences-uy1.cm](mailto:justin.kemmegne@facsciences-uy1.cm)*





**Fig.S1.** EDX spectrum of SOD

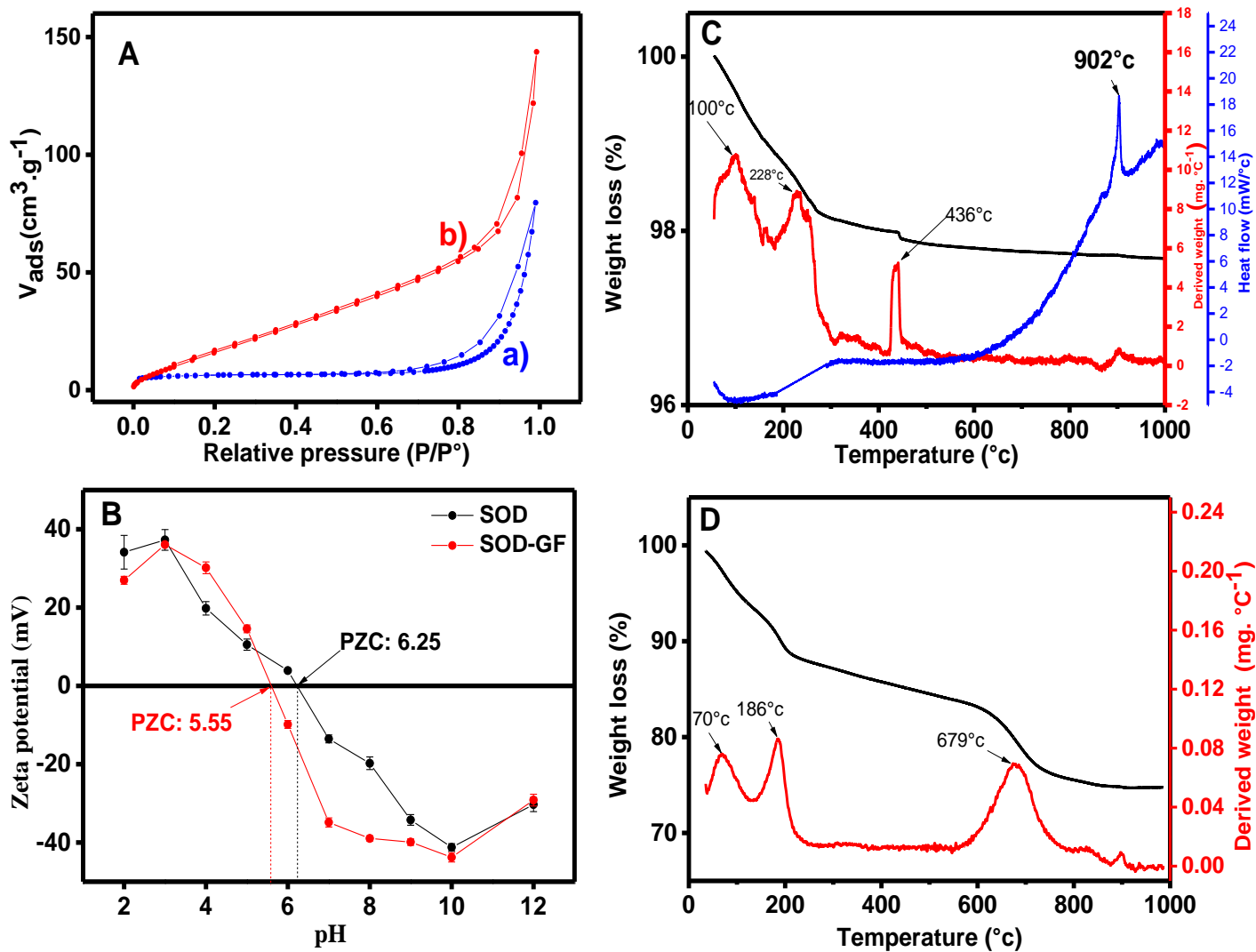
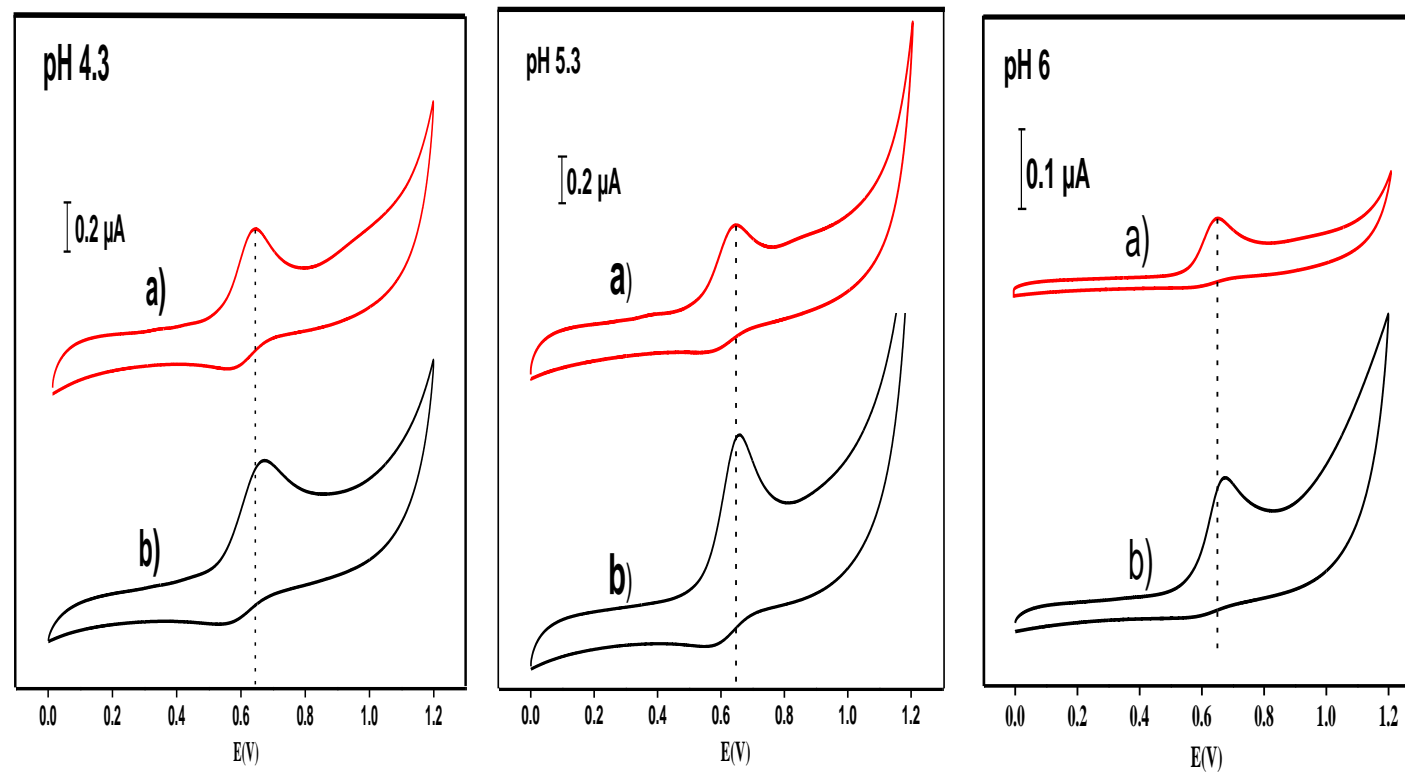
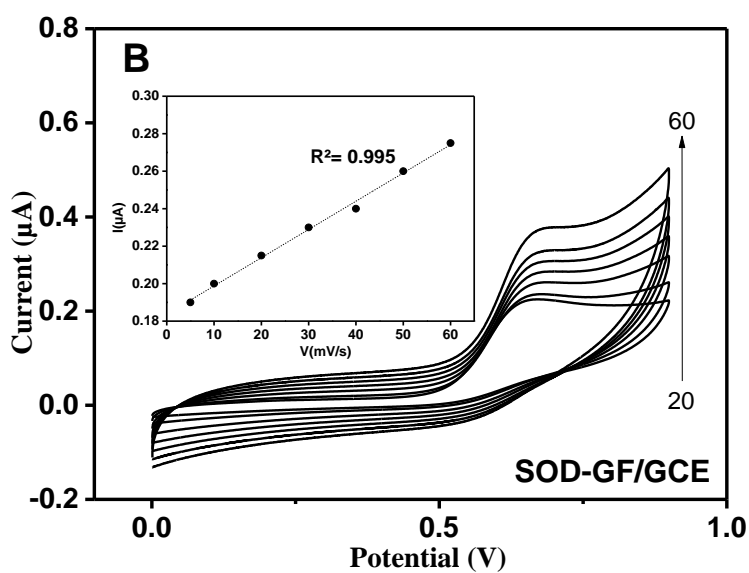
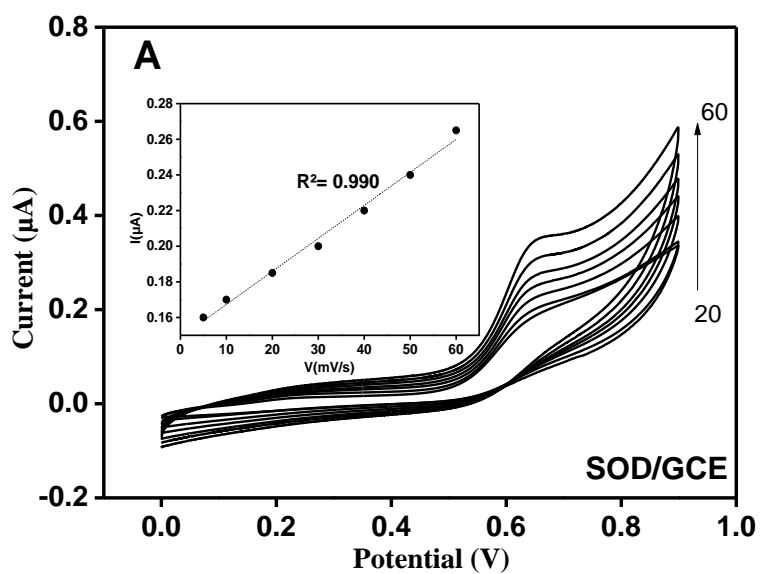


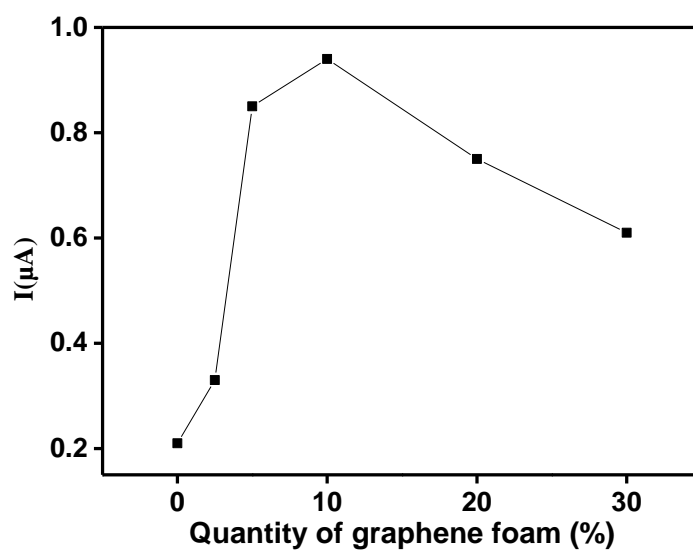
Fig. S2. A) Adsorption-desorption isotherms of a) SOD and b) SOD-GF; B) Zeta potential curves as function of pH; TGA curves of C) nanosodalite and D) composite



**Fig S3.** CVs recorded at 50 mV/s in RB at different pH containing 29.5  $\mu\text{M}$  of CPZ at **a)** SOD-GF/GCE and **b)** SOD-GF/GCE

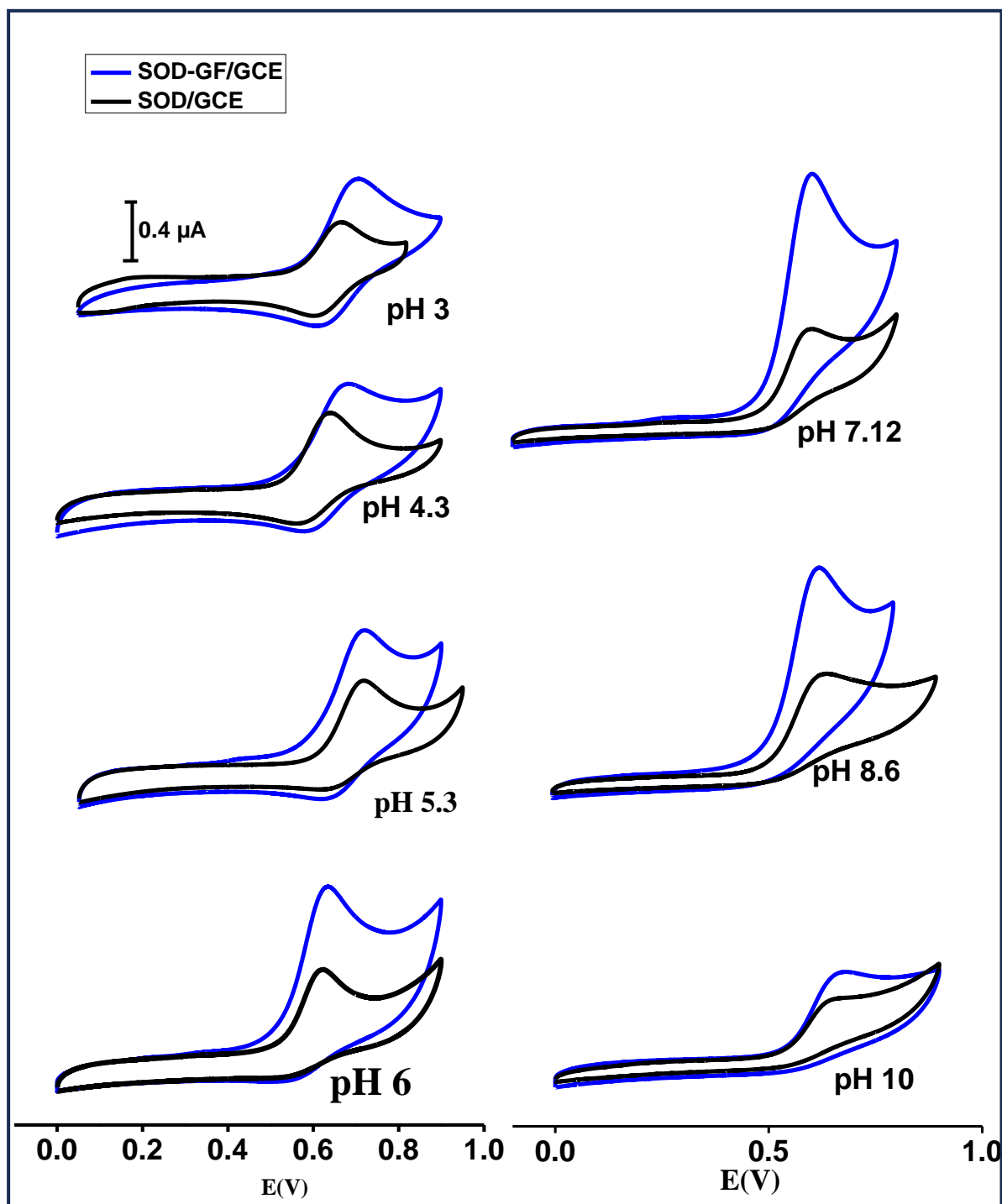


**Fig. S4.** Cyclic voltammograms recorded in RB (pH 10) at different scan rates containing 29.5  $\mu\text{M}$  of CPZ for **A)** SOD/GCE and **B)** SOD-GF/GCE; inset show the plot of peak currents vs scan rate

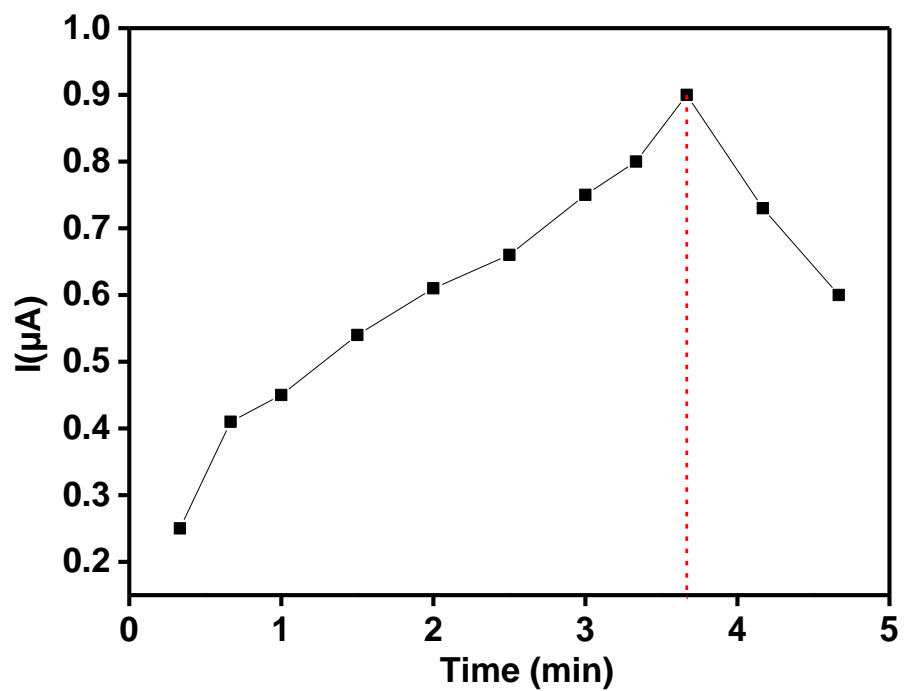


**Fig. S5.** Effect of various amounts of GF within SOD-GF composite film modified GCE on DPV currents peak recorded in RB pH 7.12 containing 5.2  $\mu\text{M}$

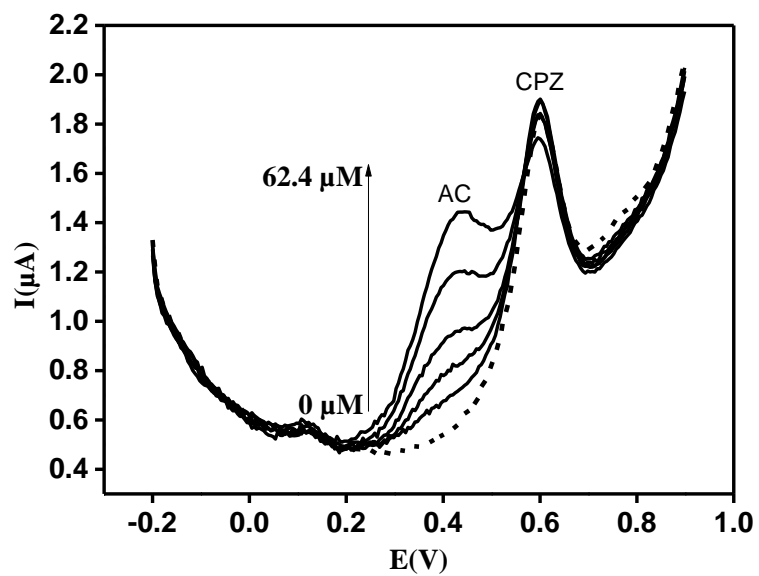




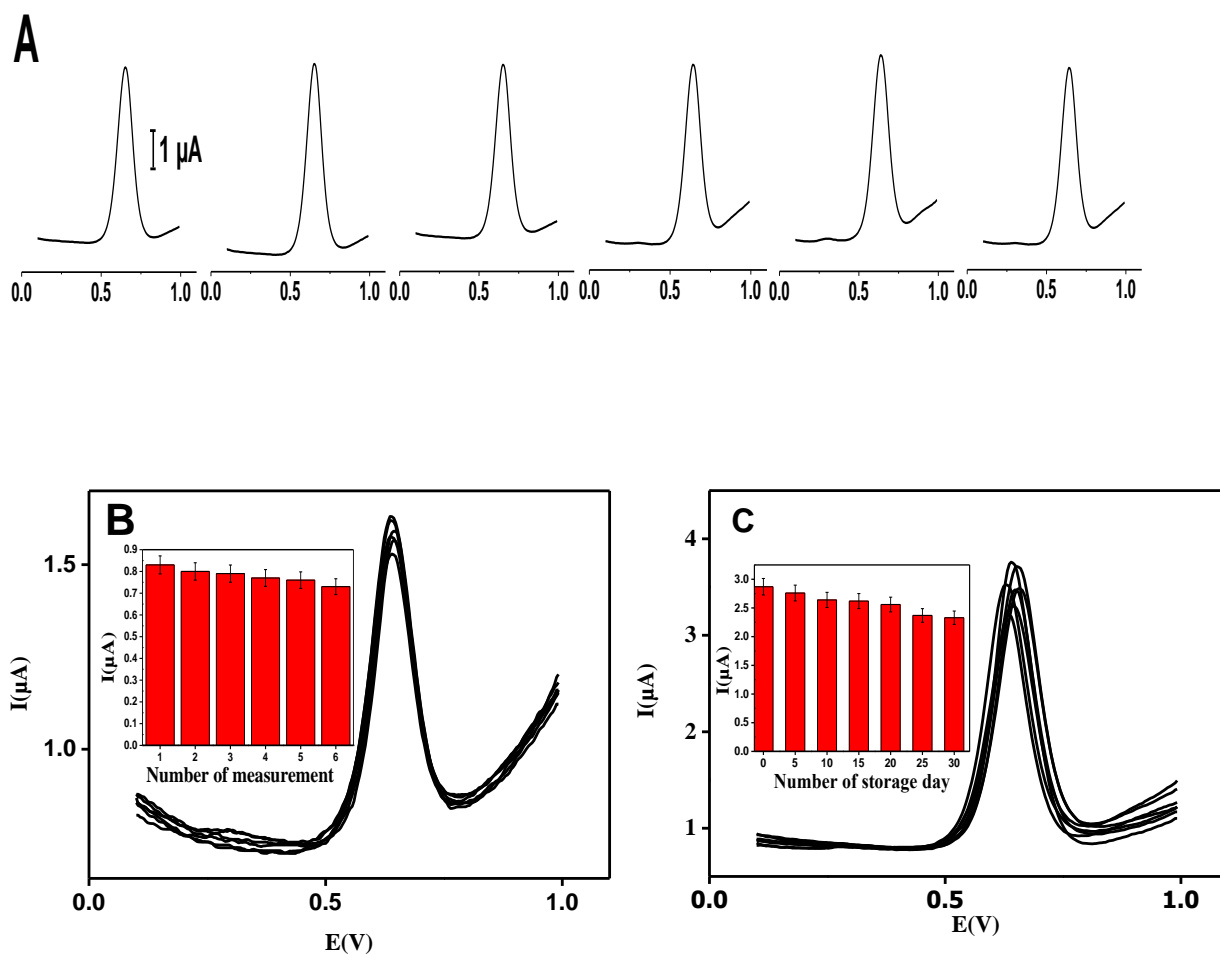
**Fig S6.** CVs recorded at 50 mV/s on SOD and SOD-GF in RB solution at different pH and containing 29.5  $\mu\text{M}$  of CPZ



**Fig. S7.** Plot of DPVs response versus accumulation time after immersion of SOD-GF/GCE in RB (pH 7.12) containing 4.5  $\mu\text{M}$  of CPZ.



**Fig. S8.** DPVs recorded at SOD-GF/GCE in RB 7.12 containing fix concentration of CPZ in which gradual addition of AC from 0 – 62.4  $\mu\text{M}$  was made



**Fig. S9.** A) DPVs recorded in RB pH 7.12 containing 20  $\mu\text{M}$  of CPZ at SOD-GF/GCE under the same experimental conditions. Superposition DPV responses recorded in RB pH 7.12 containing B) 5  $\mu\text{M}$  and C) 18  $\mu\text{M}$ . Insets represents the corresponding DPV responses.