Electronic Supplementary Material (ESI) for Analyst.

Temperature-induced amperometric glucose biosensor based on a poly (N-vinylcaprolactam)/graphene oxide composited film

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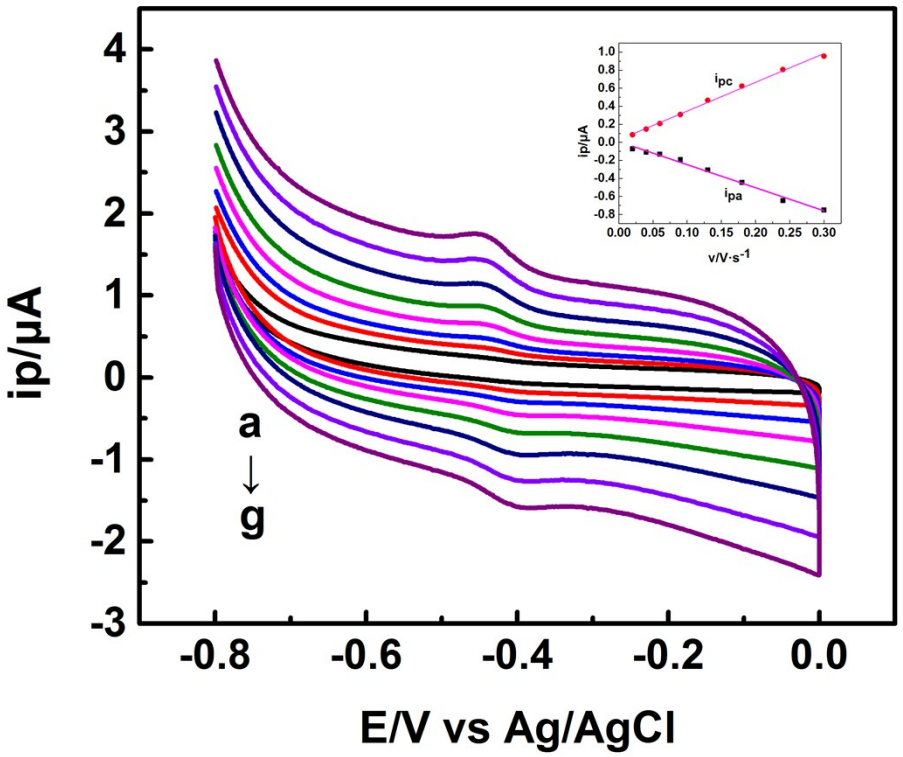

Fig. S1. Cyclic voltammetrics of PVCL / GO / GOD / GCE at various scan rates from 20, 40, 60, 90, 130, 180, and 240 to 300 $mV \cdot s^{-1}$ respectively (from a to g).Inset: plot of peak current (ip) vs scan rate. Supporting electrolyte: 0.1 $mol \cdot L^{-1}$phosphate buffer (pH 7.0)

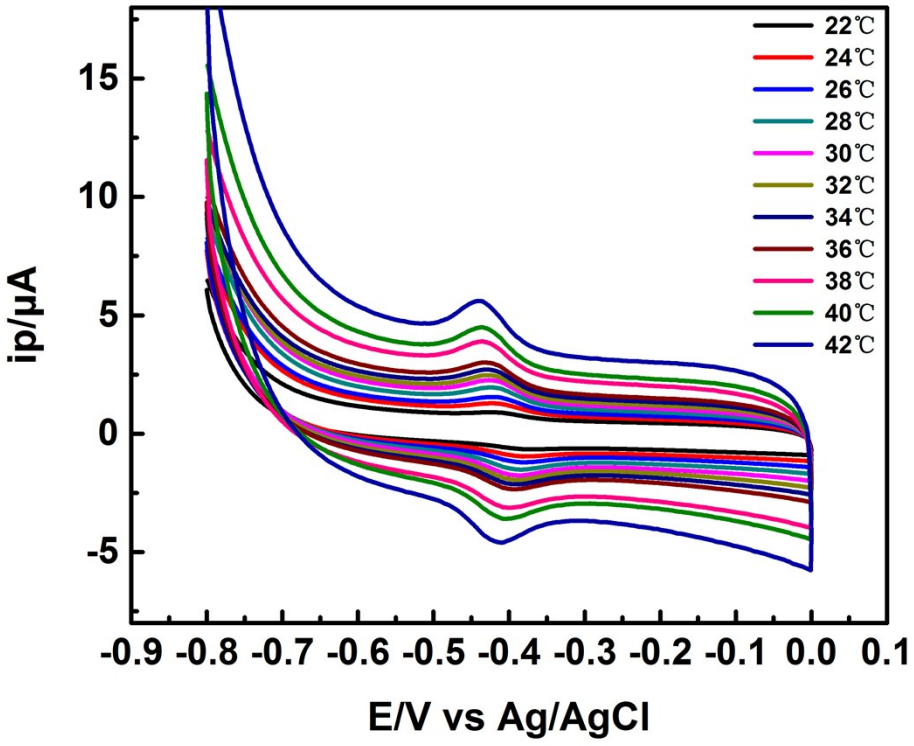

Fig. S2. CV plots of PVCL / GO / GOD / GCE at various temperatures from 22 to 42 °C; Scan

rate: 50 mV·s^{-1}; Supporting electrolyte: 0.1 mol ·L^{-1} phosphate buffer (pH 7.0).

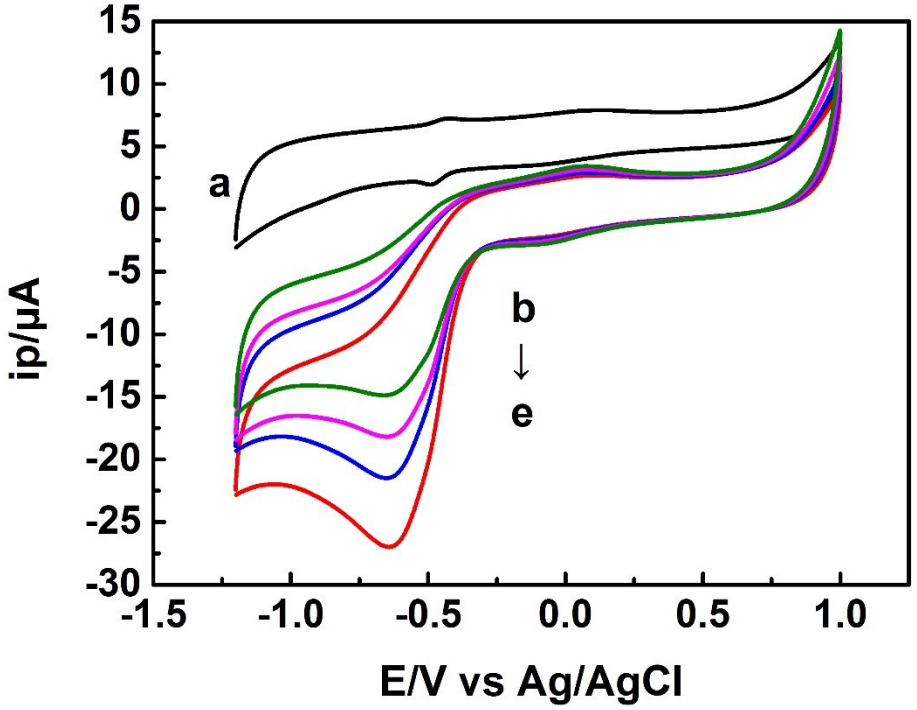

Fig. S3 CV plots of PVCL / GO / GOD / GCE at (a) N_2-saturated and at (b)(c)(d)(e)O_2-saturated with 0,0.3,0.5,0.6 mM glucose Scan rate:50 mV·s^{-1};Supporting electrolyte: 0.1 mol ·L^{-1}phosphate buffer (pH 7.0)

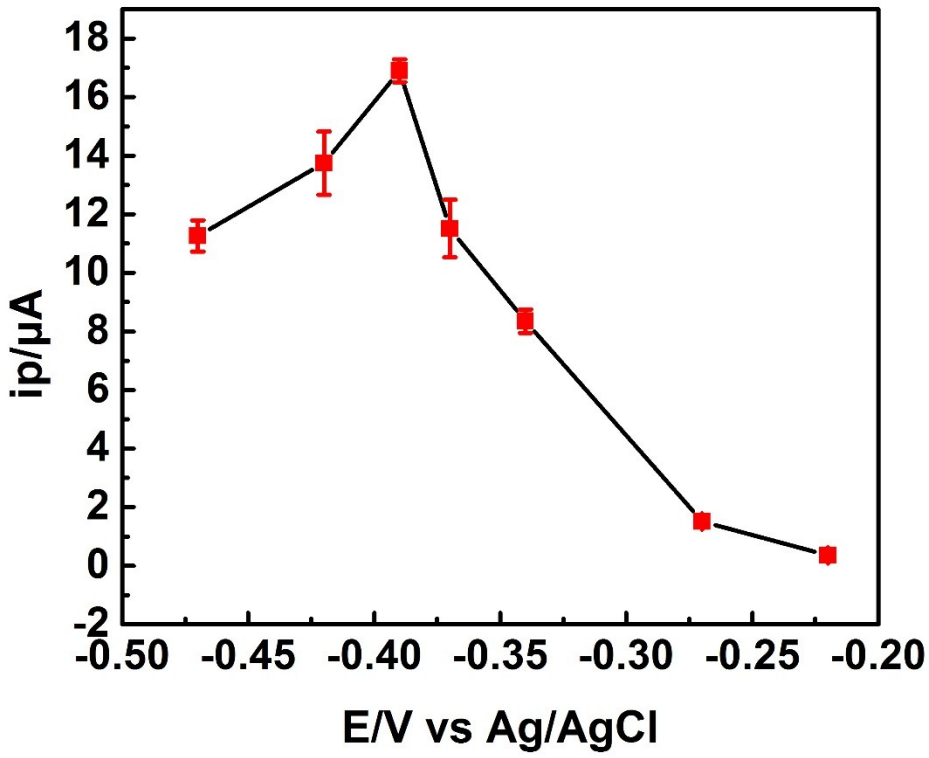

Fig.S4 under different potential ampere of glucose catalysis

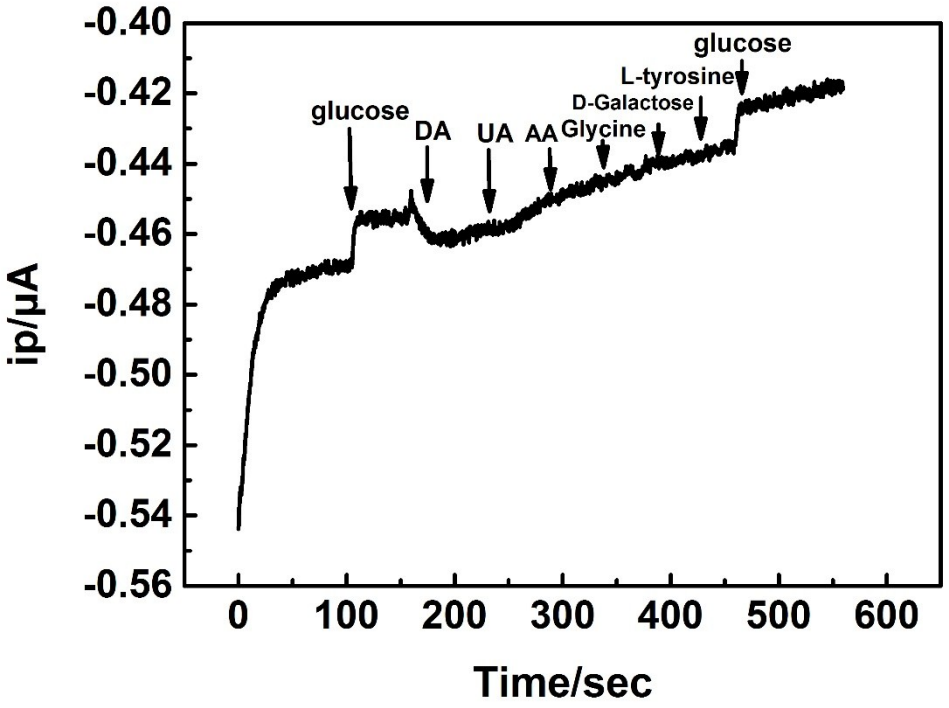

Fig. S5 Amperometric response of PVCL / GO / GOD / GCE at different interference

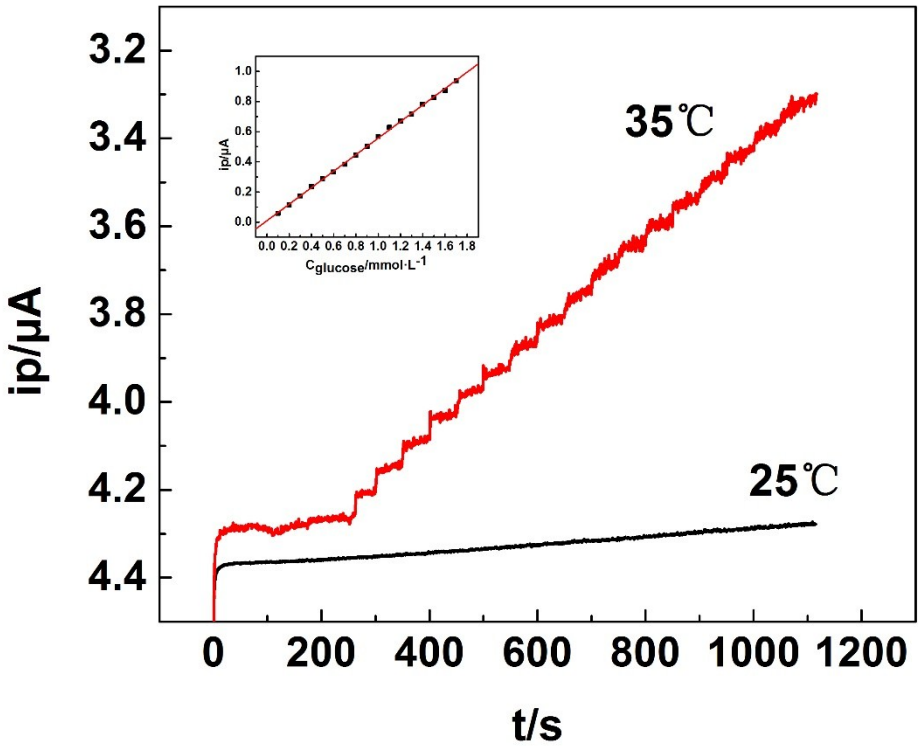

Fig.S6 Amperometric response of PVCL / GO/ GOD / GCE to glucose compare 25°C to 35°C.the inset: the current was proportional to the concentration of glucose at 35°C.