List of Supplementary Figures

Supp. Figure 1: XRD patterns of Sr_2PdO_3 and $Sr_{1.7}M_{0.3}PdO_3$ (with M= Ca, Mg and Ba) prepared by glycine-nitrate combustion method. Miller indices (h, l, k) are written in black line for Sr_2PdO_3, red line for $SrPd_3O_4$, the black symbol (0) for $SrCl_2.6\ H_2O$, red symbol (0) for KCl, blue symbol (0) for $SrCO_3$ and pink symbol (0) for PdO.

Supp. Figure 2: SEM micrographs of **(A)** graphite/Sr_2PdO_3 and **(B)** graphite/$Sr_{1.7}Ca_{0.3}PdO_3$ with magnification 20,000×.

Supp. Figure 3: The TEM diffraction patterns of **(A)** Sr_2PdO_3 and **(B)** $Sr_{1.7}Ca_{0.3}PdO_3$.

Supp. Figure 4: The particle size distribution of Sr_2PdO_3 and $Sr_{1.7}Ca_{0.3}PdO_3$.

Supp. Figure 5: CVs of 5 mM glucose/0.1 M NaOH at graphite/$Sr_{1.7}Ca_{0.3}PdO_3$ at different scan rates (5–100 mV s^{-1}), the inset; the plot of the anodic peak current values versus square root of scan rate for 5 mM glucose/0.1 M NaOH at graphite/$Sr_{1.7}Ca_{0.3}PdO_3$.

Supp. Figure 6: The effect of changing the pH value on the response of $Sr_{1.7}Ca_{0.3}PdO_3$ in 5 mM glucose solution prepared in 0.1 M PBS of pH range (11.0-12.5) and inset (2.7- 9).

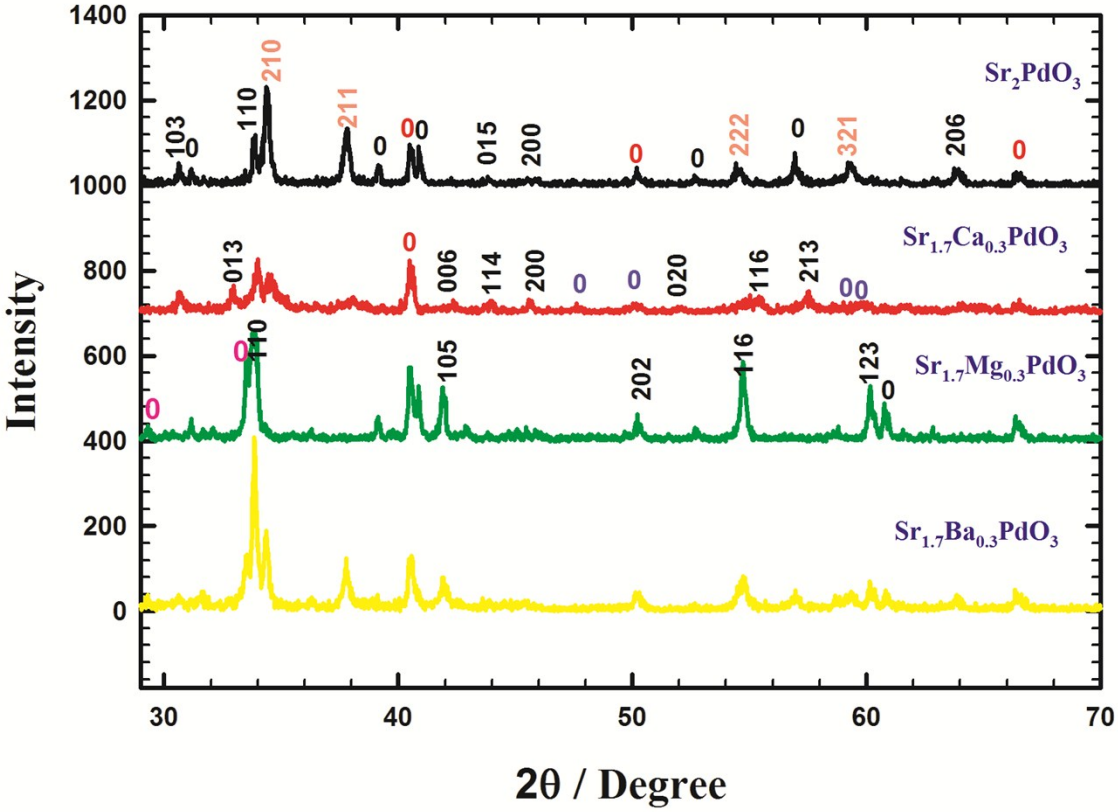
Supp. Figure 7: The effect of using different concentrations of NaOH (0.01 M - 0.5 M) on the anodic potential of 5 mM glucose at graphite/ $Sr_{1.7}Ca_{0.3}PdO_3$. Inset; the effect of using different concentrations of NaOH (0.01 M - 0.5 M) on the anodic peak current of 5 mM glucose at graphite/ $Sr_{1.7}Ca_{0.3}PdO_3$.

Supplement Table 1: Comparison for determination of glucose at various modified electrodes-based literature reports.

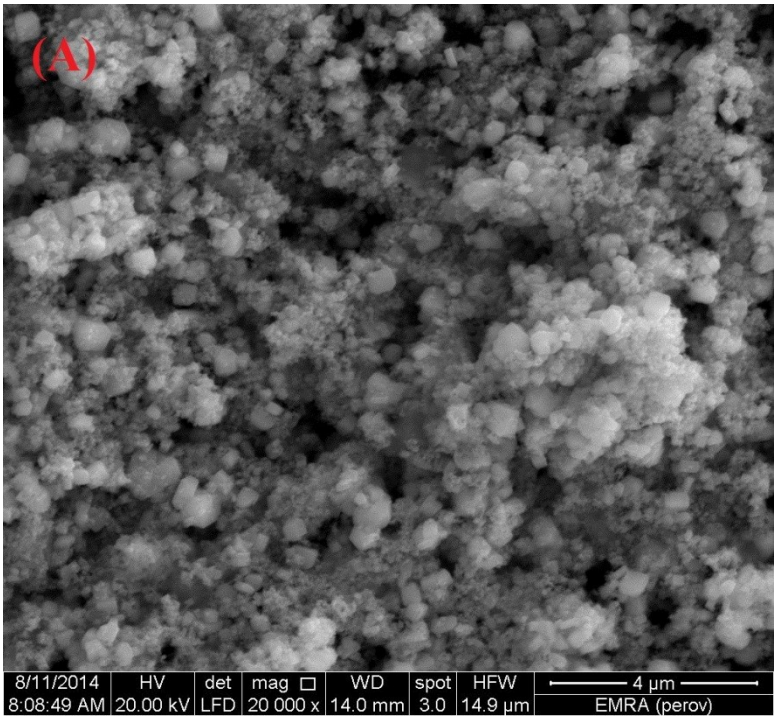
Electrode	Technique	Electrolyte	LDR	Sensitivity ($\mu A\ mM^{-1}\ cm^{-2}$)	LOD (μM)
Pt/Ni–Co nanowires [1]	Amperometric	0.1 M NaOH	0–0.2 mM	1125	1
$LaNiO_3$ nanofibers [2]	Amperometric	0.1 M NaOH	1 μM – 1000 μM	42.321	0.32
P4VP-co-PAN [6]	Amperometric	0.1 M PBS, pH 7.4	2.5 μM – 0.58 mM	1382.8	0.58
Cu-Co NSs/RGO-CHIT/GCE [7]	Amperometric	0.1 M NaOH	0.015 mM – 6.95 mM	1921	10
Pt/PGA/GCE [8]	Amperometric	0.2 M PBS, pH 7.4	0.05 – 5.95 mM	Not reported	11
Gold nanoparticles [11]	Voltammetric	0.1 M NaOH	0.1 mM – 25 mM	87.5	50
CNT/Au [12]	Voltammetric	0.01 M PBS, pH 7.2	0 mM – 20 mM	18.6	100
CS-RGO–NiNPs [13]	Amperometric	0.1 M NaOH	0.2 mM – 9 mM	318.4	4.1
PtNFs-GO [14]	Amperometric	0.05 M PBS, pH 7.4	2 μM – 10.3 mM	1.26	2
$La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-\delta}$ [17]	Amperometric	0.1 M KOH	0 μM – 200 μM	285	7
graphite/$Sr_{1.7}Ca_{0.3}PdO_3$ (This work)	**Voltammetric**	**0.1 M NaOH**	**5 μM – 5.6 mM**	**5166.7**	**0.0845**

P4VP-co-PAN; poly(4-vinylpyridine)-co-poly(acrylonitrile) copolymer, Cu-Co NSs/RGO-CHIT/GCE; dendritic copper-cobalt nanostructures/reduced graphene oxide-chitosan modified glassy carbon electrode, Pt/PGA/GCE; Pt onto a poly(glutamic acid) film modified glassy carbon electrode, CS-RGO–NiNPs; nanocomposites of chitosan-reduced graphene oxide– nickel nanoparticles, PtNFs-GO; glassy carbon electrode modified with platinum nanoflowers supported on graphene oxide and CNT/Au; nanosized gold onto carbonnanotubes.

Supp. Fig. 1


Intensity
2θ / Degree
Sr2PdO3
Sr1.7Ca0.3PdO3
Sr1.7Mg0.3PdO3
Sr1.7Ba0.3PdO3
103
110
210
211
015
200
222
321
206
013
006
114
020
116
213
105
202
123

Supp. Fig. 2


(A)
8/11/2014 | HV | det | mag | WD | spot | HFW | 4 µm
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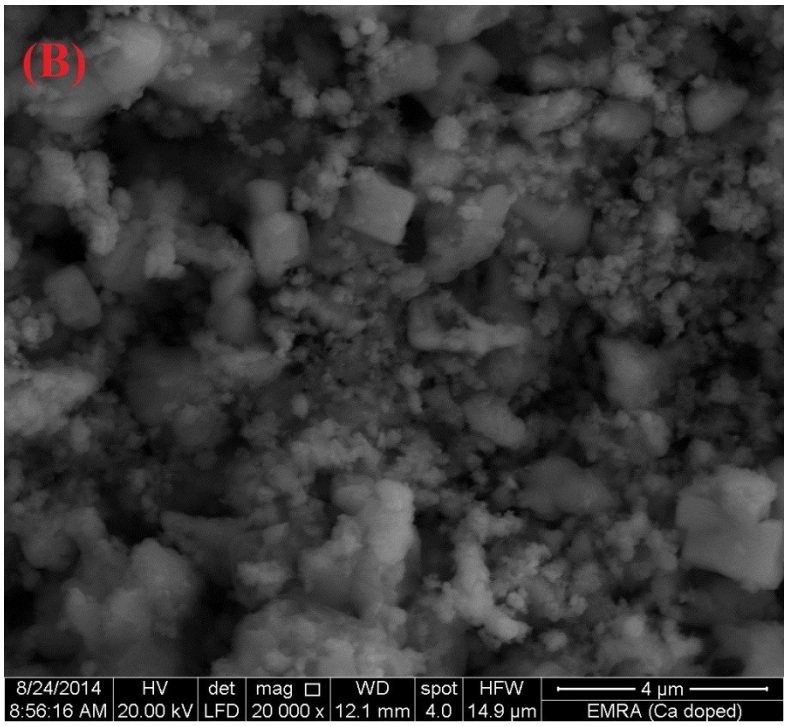
(B)
8/24/2014 | HV | det | mag | WD | spot | HFW | 4 µm
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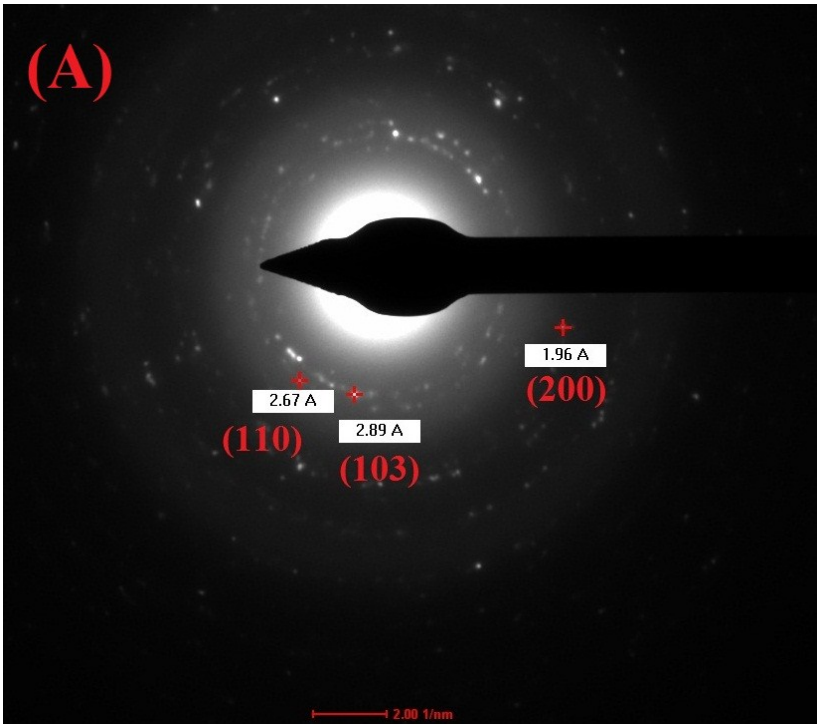
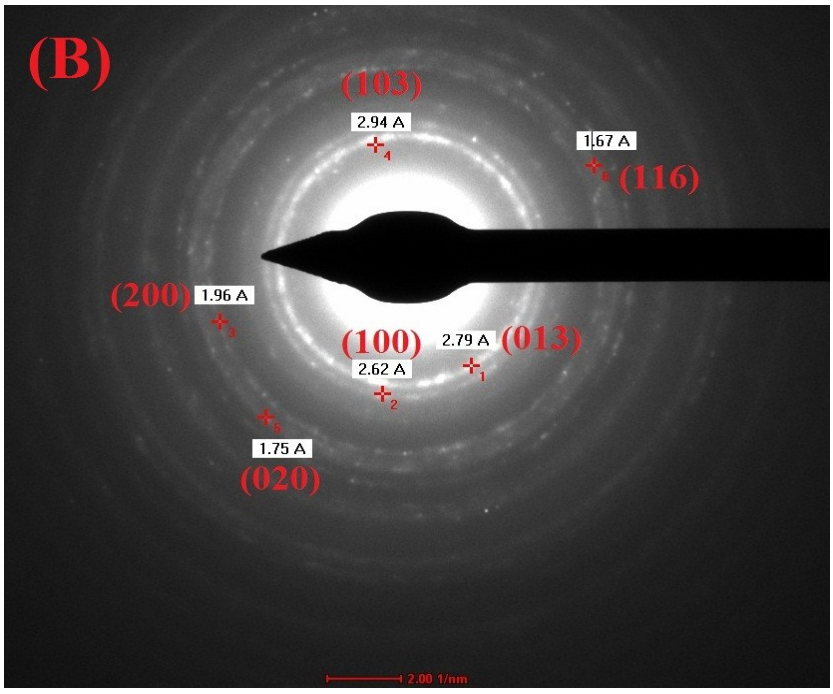
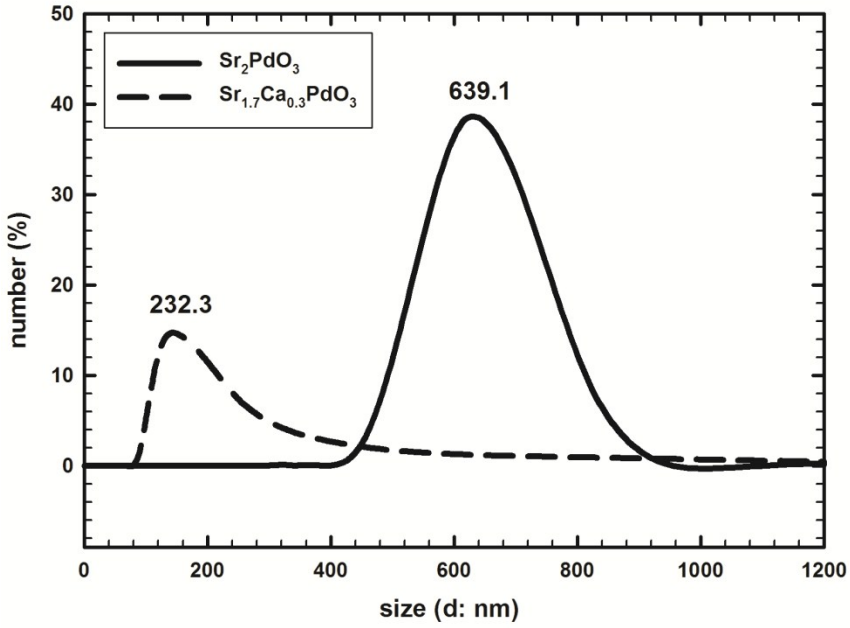
Supp. Fig. 3

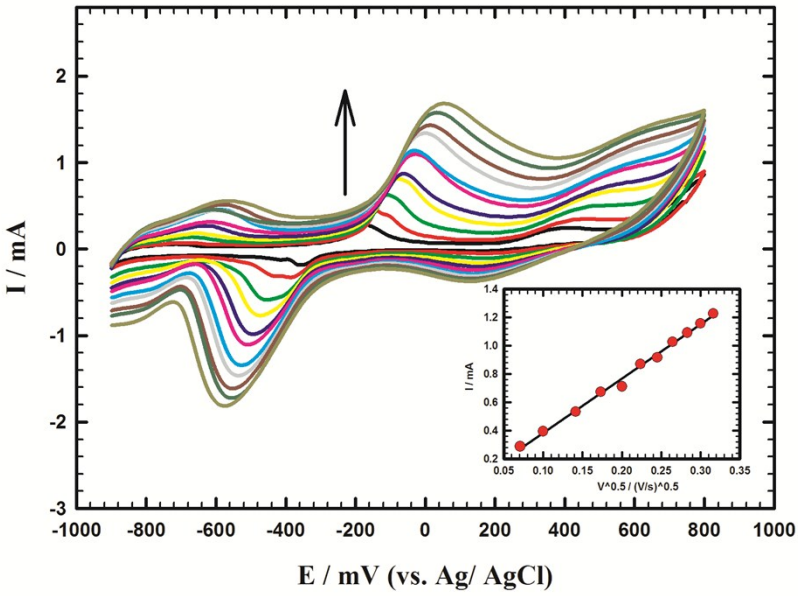

(A)
1.96 A
(200)
2.67 A
2.89 A
(110)
(103)
2.00 1/nm


(B)
(103)
2.94 A
1.67 A
(116)
(200)
1.96 A
(100)
2.79 A
(013)
2.62 A
1.75 A
(020)
2.00 1/nm

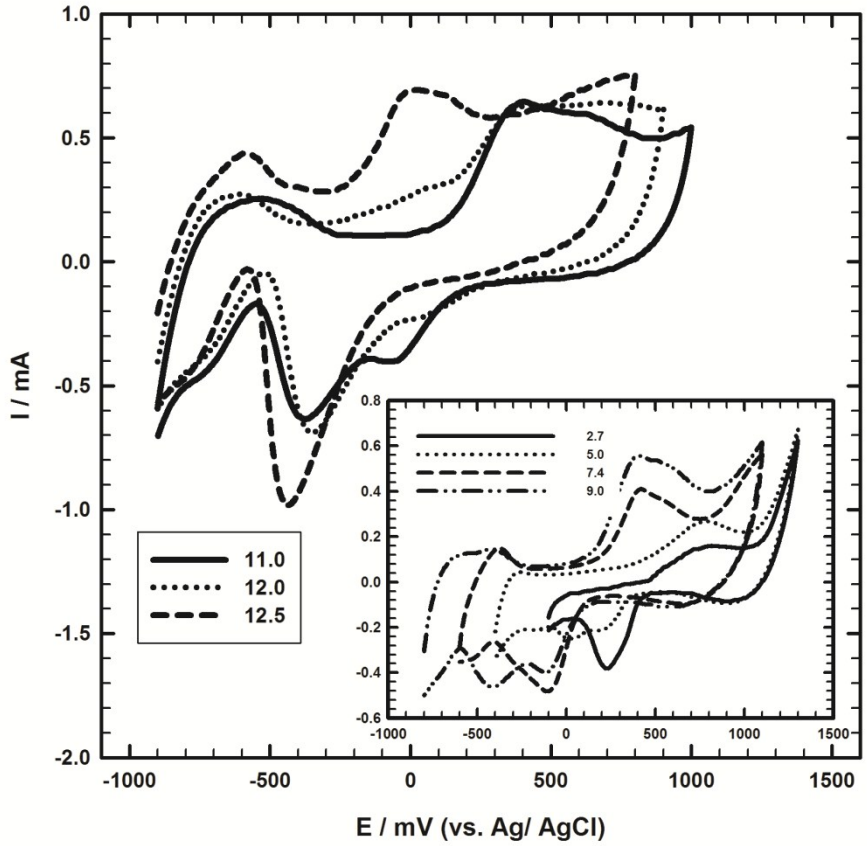
Supp. Fig. 4


Sr2PdO3
Sr1.7Ca0.3PdO3
639.1
232.3
number (%)
size (d: nm)
0
10
20
30
40
50
0
200
400
600
800
1000
1200

Supp. Fig. 5



Supp. Fig. 6



Supp. Fig. 7