

Supporting Information

Design and Fabrication of Surface Capped Palladium Nanoclusters for the Subnanomolar Sensing of Glutathione

Padamadathil K. Aneesh, Chinju Govind, Sindhu R. Nambiar*

Corresponding author: **Dr. Sindhu R. Nambiar**,
Scientist, Electroplating and Metal Finishing Division,
CSIR- Central Electrochemical Research Institute (CSIR-CECRI),
Karaikudi-630006, India
Email: sindhurnambiar@cecri.res.in
Ph: 04565-241568

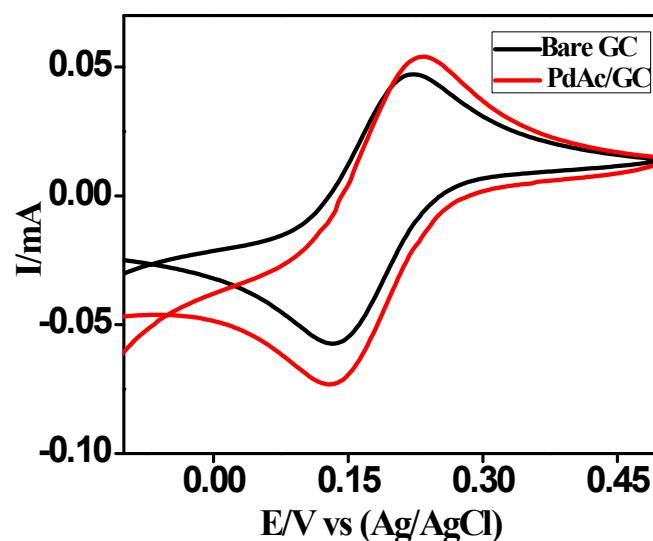


Figure S1: Cyclicvoltammogram of 5mM of $\text{K}_3[\text{Fe}(\text{CN})_6]$ in 0.1M KCl as supporting electrolyte with scan rate of 50 mVs^{-1} at bare glassy carbon (black curve) and PdAC/GCE (red curve).

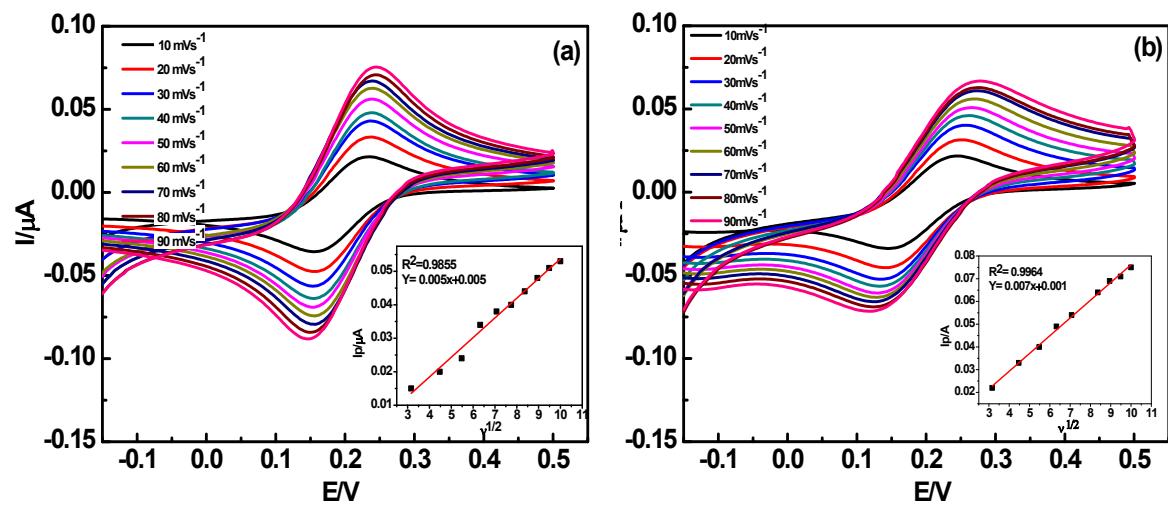


Figure S2: Scan rate variation (10 to 90 mVs^{-1}) studies at Bare GCE (a) and PdAC/GCE (b) with $1\text{mM } \text{K}_3[\text{Fe}(\text{CN})_6]$ in 0.01 M KCl as supporting electrolyte.

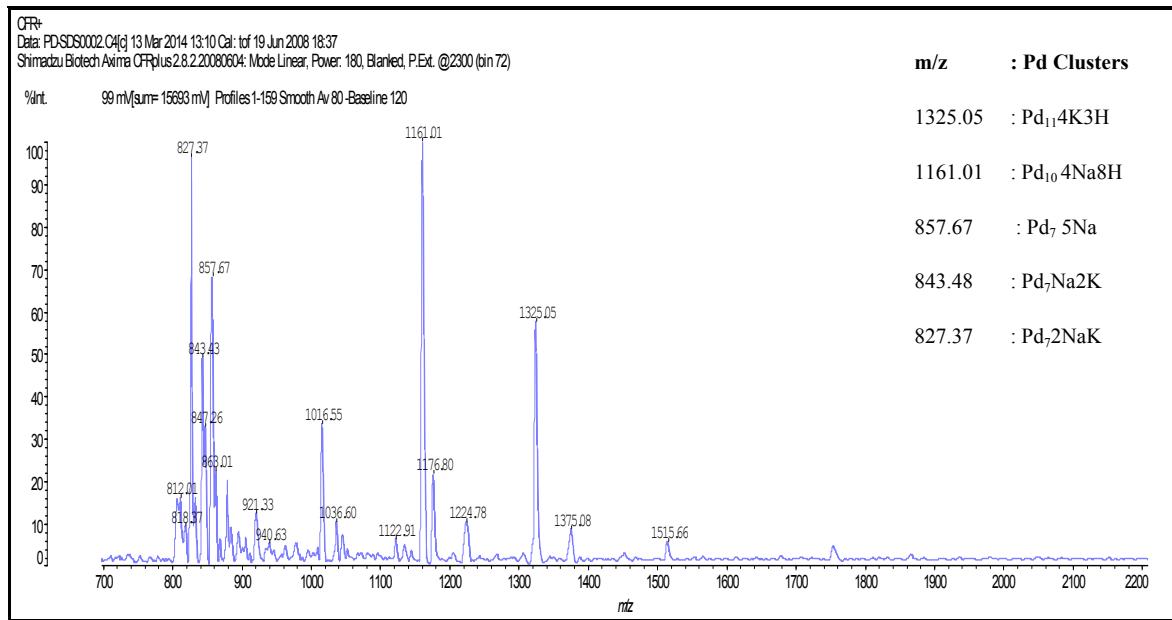


Figure S3: MALDI-TOF-MS spectra of electrochemically synthesized PdAC in presence of 50 mM of SDS and 1mM of PdCl₂ solution using potentiodynamic method.

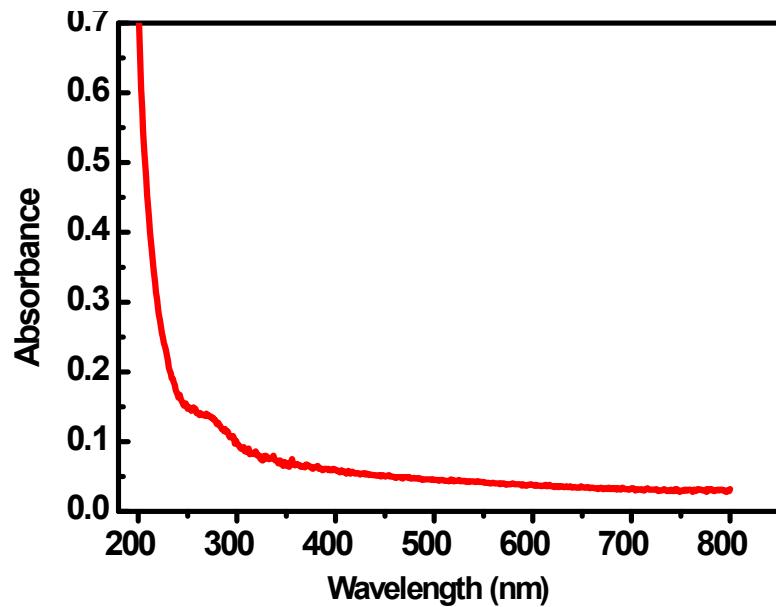


Figure S4: Absorbance spectra of palladium atomic clusters formed by potentiodynamic cycling in the range +0.50 to -0.50 V for 50 cycles in the presence of 50 mM of anionic surfactant SDS.

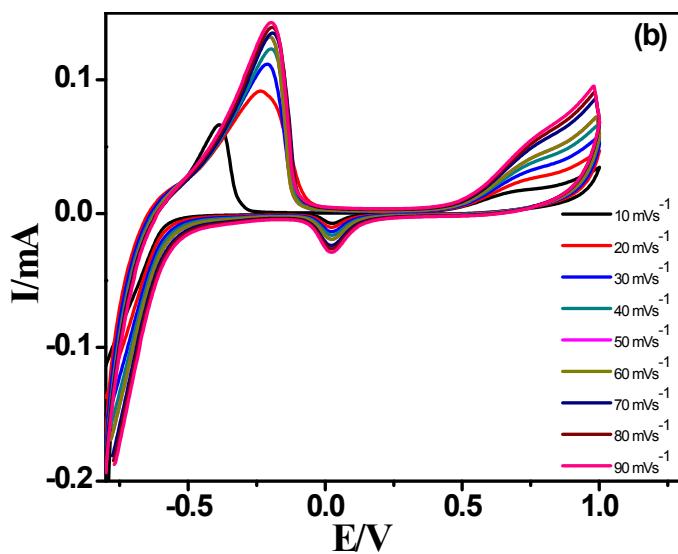


Figure S5: The effect of sweep rate on the electrocatalytic behaviour of PdAC-GCE modified electrode towards the oxidation of glutathione

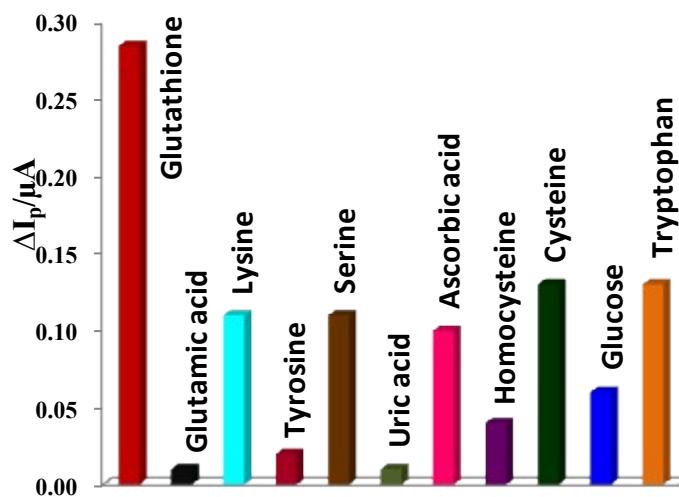


Figure S6: Selectivity studies using differential pulse cathodic stripping voltammetric signals of glutathione and other biologically co-existing molecules (1×10^{-6} M each).