## **Supporting Information**

Facile and novel synthesis of palladium nanoparticles supported carbon aerogel for ultrasensitive electrochemical sensing of biomolecules<sup>†</sup>

Chellakannu Rajkumar,<sup>a</sup> Pitchaimani Veerakumar<sup>\*,b,c</sup> Shen-Ming Chen<sup>\*,a</sup> Balamurugan Thirumalraj,<sup>a</sup> and Shang-Bin Liu<sup>c</sup>

<sup>a</sup> Department of Chemical Engineering and Biotechnology, National Taipei University of Technology, Taipei 10608, Taiwan

<sup>b</sup> Department of Chemistry, National Taiwan University, Taipei 10617, Taiwan <sup>c</sup> Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 10617, Taiwan

E-mail: smchen78@ms15.hinet.net Tel.: +886-2-27017147; Fax: +886-2-2702523 Email: spveerakumar@gmail.com Tel.:+886-2-23668288; Fax: +886-2-23620200



**Figure S1**. (a) HR-TEM image, (b) SAED pattern, and (c) EDX spectrum of the Pd/CA nanocomposite material.



**Figure S2**. Effect of electrolyte pH on electrocatalytic activity over the DA and ML sensors.



**Figure S3**. Amperometric responses of Pd/CA-modified electrode during detection of (a) DA and (b) ML while in the presence of excessive concentration (*ca.* 200-folds) of assorted electroactive interferences, *viz.* K<sup>+</sup>, Na<sup>+</sup>, Co<sup>2+</sup>, Ca<sup>2+</sup>, Mg<sup>2+</sup>, I<sup>-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, F<sup>-</sup>, and  $SO_4^{2-}$  ions.