

## **Supplementary Information**

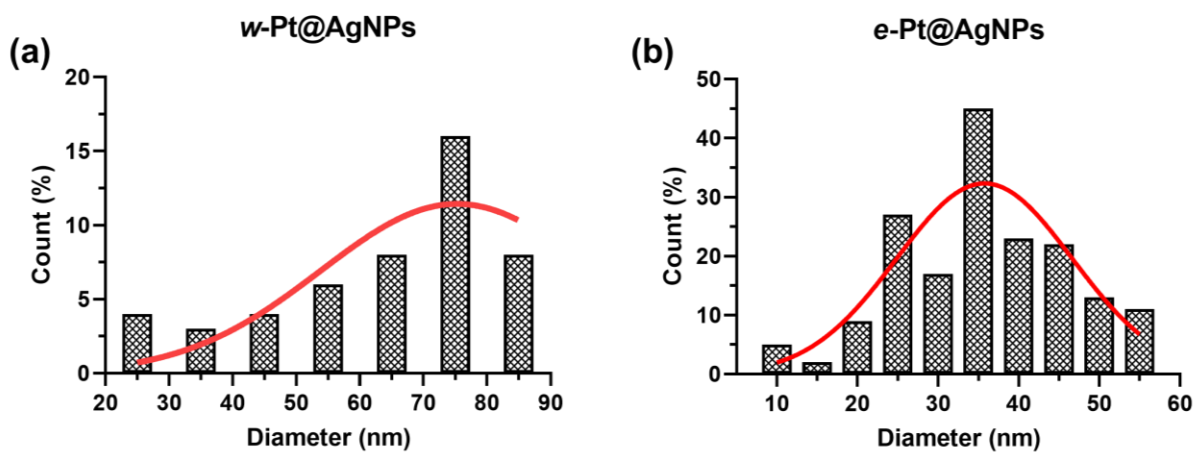
### **Phytochemical-stabilized platinum-decorated silver nanocubes inhibit adenocarcinoma cells and enhance antioxidant effects by promoting apoptosis via cell cycle arrest**

Adewale O. Oladipo <sup>1\*</sup>, Jeremiah O. Unuofin <sup>1</sup>, Sogolo L. Lebelo <sup>1</sup>, Titus A.M. Msagati <sup>2</sup>

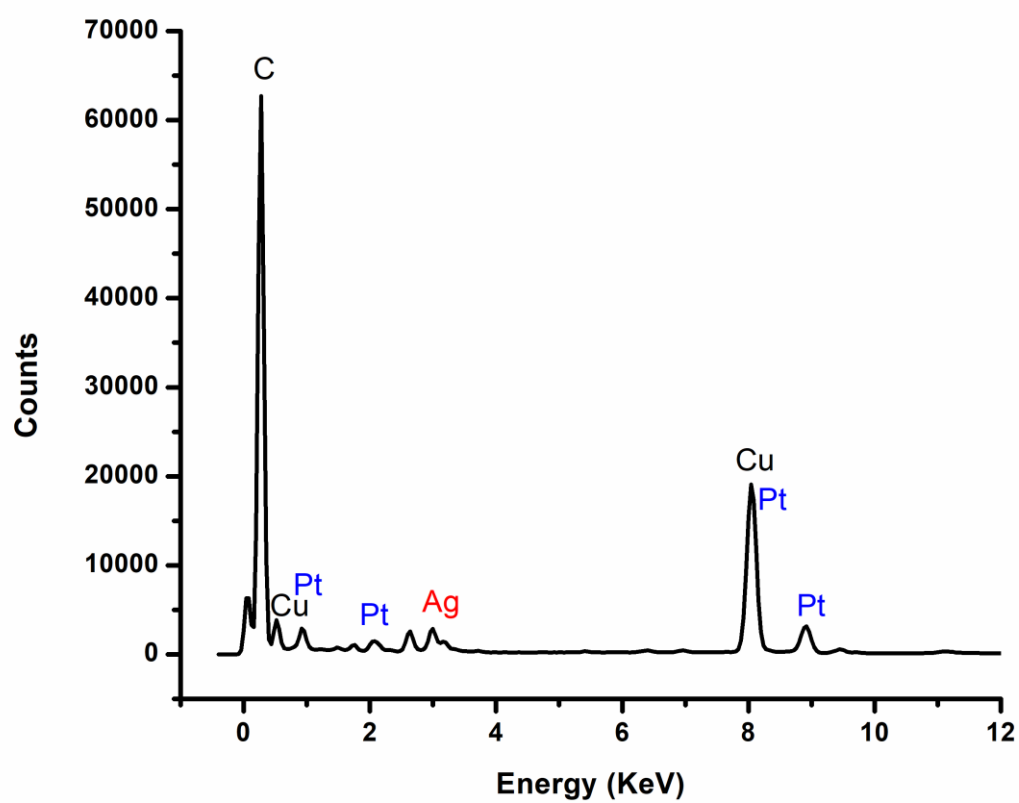
<sup>1</sup>Department of Life and Consumer Sciences, College of Agriculture and Environmental Sciences, University of South Africa, Private Bag X06 Florida 1710, South Africa

<sup>2</sup>Institute for Nanotechnology and Water Sustainability (iNanoWS), College of Science, Engineering and Technology, University of South Africa, Private Bag X06 Florida 1710, South Africa

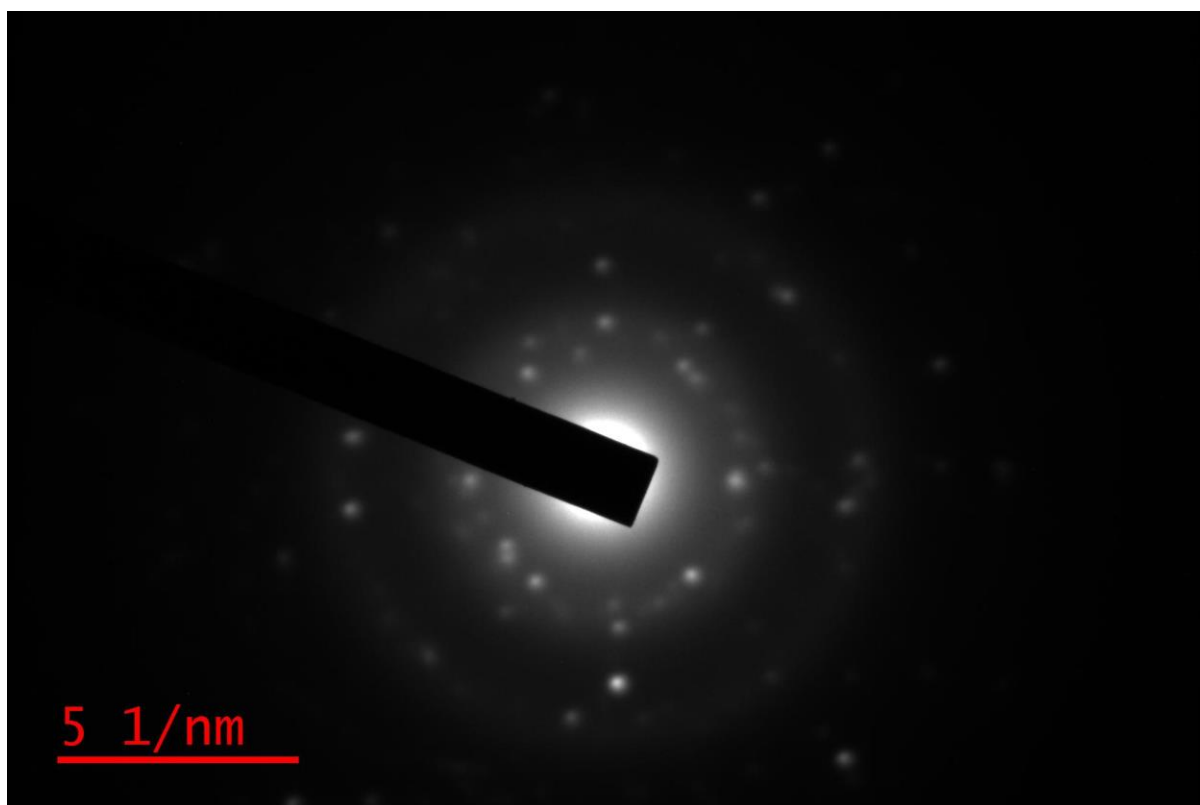
Author for correspondence: oladio@unisa.ac.za



**Figure S1.** Particle size distribution showing the average diameter of *w*-Pt@AgNPs and *e*-Pt@AgNPs.



**Figure S2.** Representative EDS profile of *e*-Pt@AgNPs confirming the presence of Ag and Pt metals.



**Figure S3.** Selected area electron diffraction (SAED) pattern of *e*-Pt@AgNPs.

**Table S1.** Zeta-potential and polydispersity index (PDI) of *w*-Pt@AgNPs (Mean  $\pm$ SD; n=3).

Days	Particle size (nm)	PDI	Zeta potential (mV)
0	84.2 $\pm$ 1.39	0.220	-30.3 $\pm$ 2.81
1	85.3 $\pm$ 0.45	0.214	-30.2 $\pm$ 1.66
2	85.1 $\pm$ 2.08	0.184	-30.5 $\pm$ 2.13
3	85.4 $\pm$ 1.91	0.209	-30.4 $\pm$ 2.53
4	85.7 $\pm$ 3.12	0.216	-30.3 $\pm$ 4.31
5	86.0 $\pm$ 1.87	0.197	-30.6 $\pm$ 3.82

**Table S2.** Zeta-potential and polydispersity index (PDI) of *e*-Pt@AgNPs (Mean  $\pm$ SD; n=3).

Days	Particle size (nm)	PDI	Zeta potential (mV)
0	39.4 $\pm$ 2.01	0.109	-25.0 $\pm$ 2.11
1	39.3 $\pm$ 1.34	0.213	-24.8 $\pm$ 3.02
2	39.7 $\pm$ 3.12	0.401	-25.3 $\pm$ 1.06
3	39.8 $\pm$ 2.63	0.311	-25.4 $\pm$ 1.66
4	40.1 $\pm$ 4.07	0.342	-25.3 $\pm$ 1.31
5	40.4 $\pm$ 5.42	0.308	-26.0 $\pm$ 2.17