

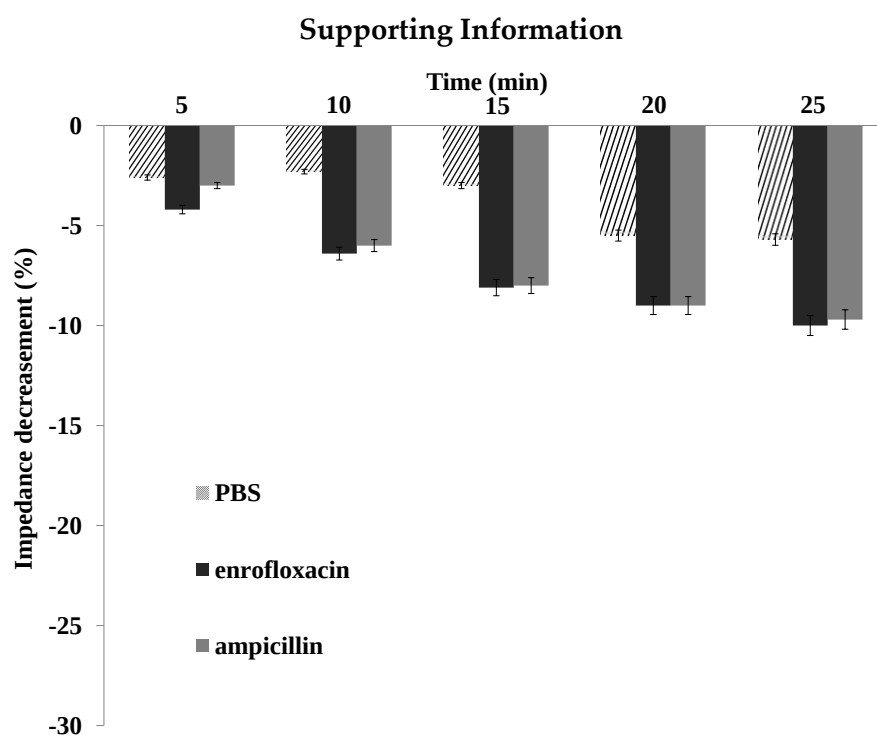


Figure S1. Time courses of the relative impedance amplitude signal changes of nanoporous alumina membrane without GQDs with the antibiotics function time.

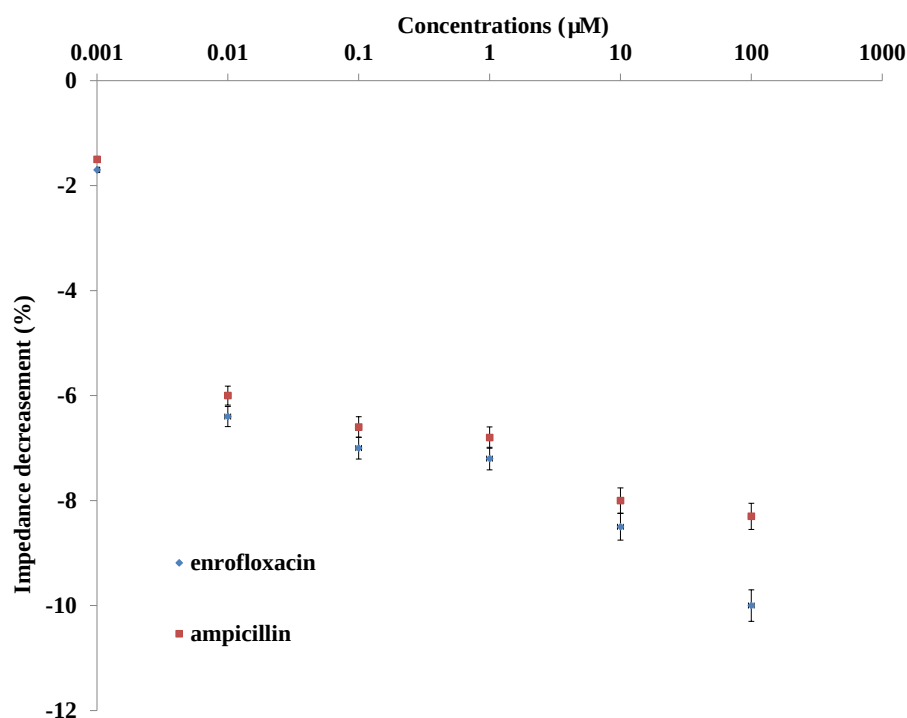


Figure S2. The impedance change of nanoporous alumina membrane without GQDs with different concentrations of enrofloxacin and ampicillin at incubation time of 10 minutes.