

Supplementary Information

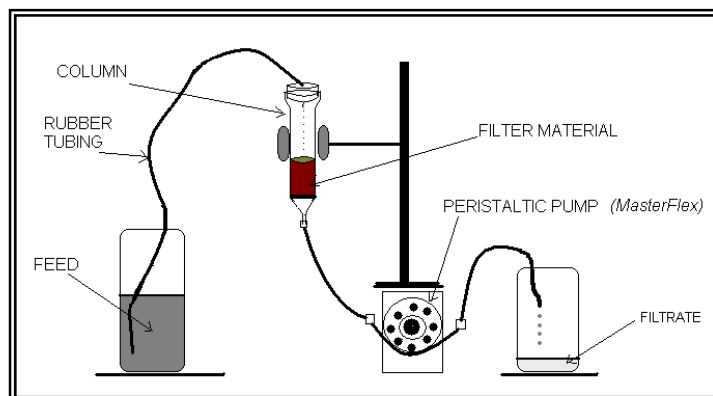


Figure S1. Schematic representation of the filter assembly

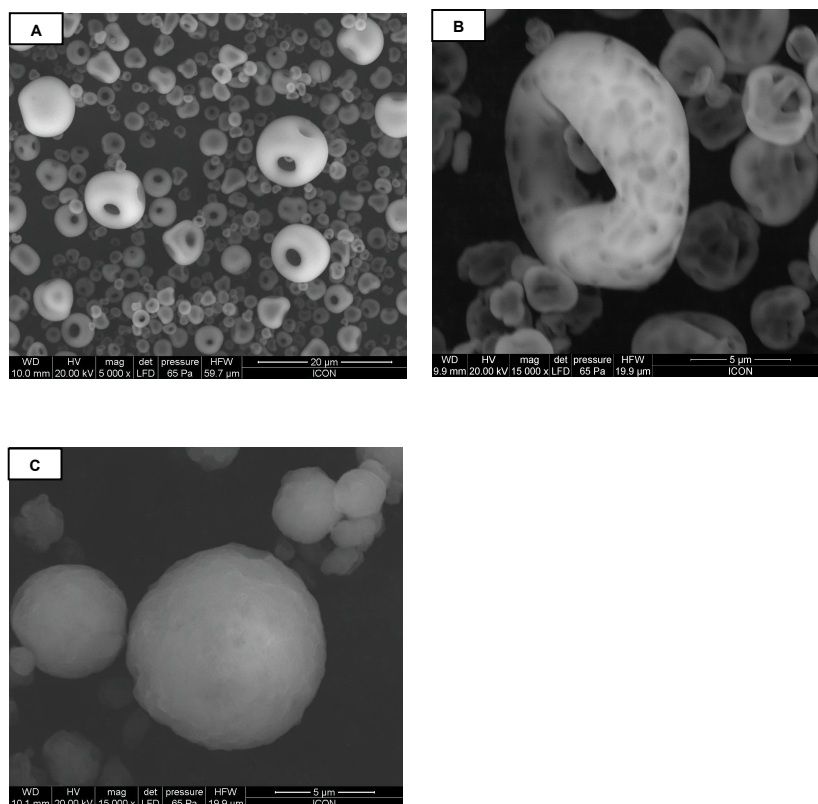


Fig. S2: Scanning electron micrograph of grains obtained by EISA of A) plain silica nanoparticles; B) silica nanoparticles and *E. coli* cells before the calcination step and C) silica nanoparticles and PEI treated cells before the calcination step.