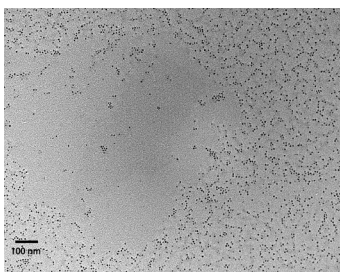


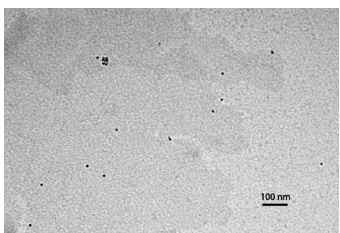
**Figure S1**

Gold nanoparticles adsorbed in a random pattern on HPI layer. Sample stained with 2% uranyl acetate where adsorption to both vertex and central pore regions can be seen (some regions enclosed by dotted line rectangles)



**Figure S2**

Control experiment where polycationized ferritin (PCF) was adsorbed to HPI layers. The outline of a HPI sheet can be seen and in effect no PCF adsorb onto the HPI layers



**Figure S3**

Control experiment where hydrophilic  $\text{HS}(\text{CH}_2)_{11}\text{OH}$ -derivatized gold nanoparticles were adsorbed to HPI layers. The outline of a HPI sheet can be observed, and as seen, no specific adsorption of gold nanoparticles occurs.