

## Electronic Supplementary Information

### Self-formed silver nanoparticles on freestanding silicon nanowire arrays featuring SERS performances

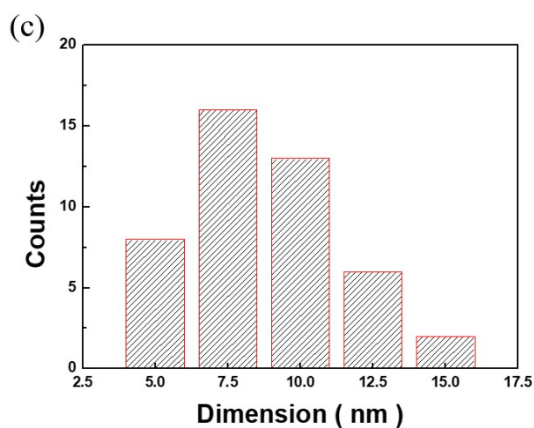
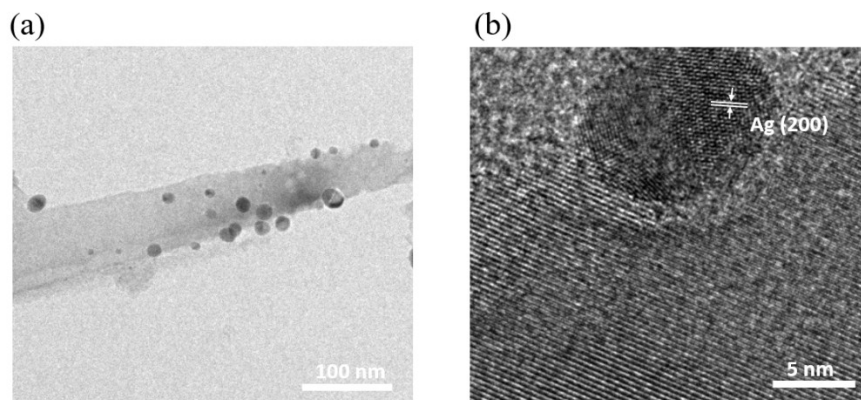
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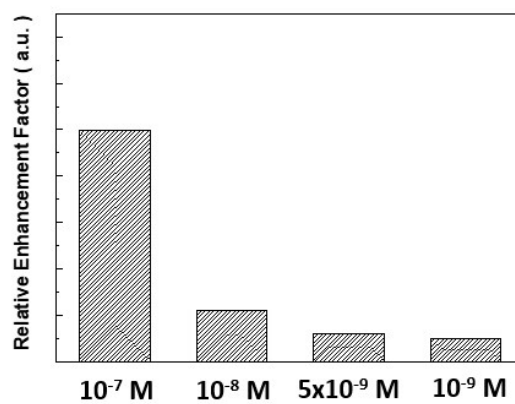
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**Figure S1** (a) Representative TEM image of a transferred SiNW. (b) Representative HRTEM image of a AgNP coated on SiNW. (c) Size distribution of AgNPs.



**Figure S2** REFs of SiNW films with self-formed AgNPs for detecting various concentrations of R6G molecules.