Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C. This journal is © The Royal Society of Chemistry 2014

Plasmonic Calligraphy: Charge-selective SERS

## Supporting information: Multiplexed Charge-Selective Surface Enhanced Raman Scattering based on Plasmonic Calligraphy

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**Figure S1**: SEM images of PAH@AuNRs adsorbed on paper substrates by plasmonic calligraphy approach.



**Figure S2**: Raman spectra of bulk form of methyl orange (MO) and rhodamine 6G (R6G) powder.



Figure S3: Representative SERS spectra (A) before and (B) after background removal.



**Figure S4**: (A) SERS spectra obtained from PSS-AuNRs test domain after exposure to different concentration of R6G in 1 mg/ml shampoo solution (D) Zoom in SERS spectra for low concentration of R6G compared with PSS-AuNRs control sample.