Supporting Information

Protective Cotton Textiles via Amalgamation of Cross-linked Zeolitic Imidazole Framework.

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Figure S1: XRD for Cotton fabric after modification with Silicate

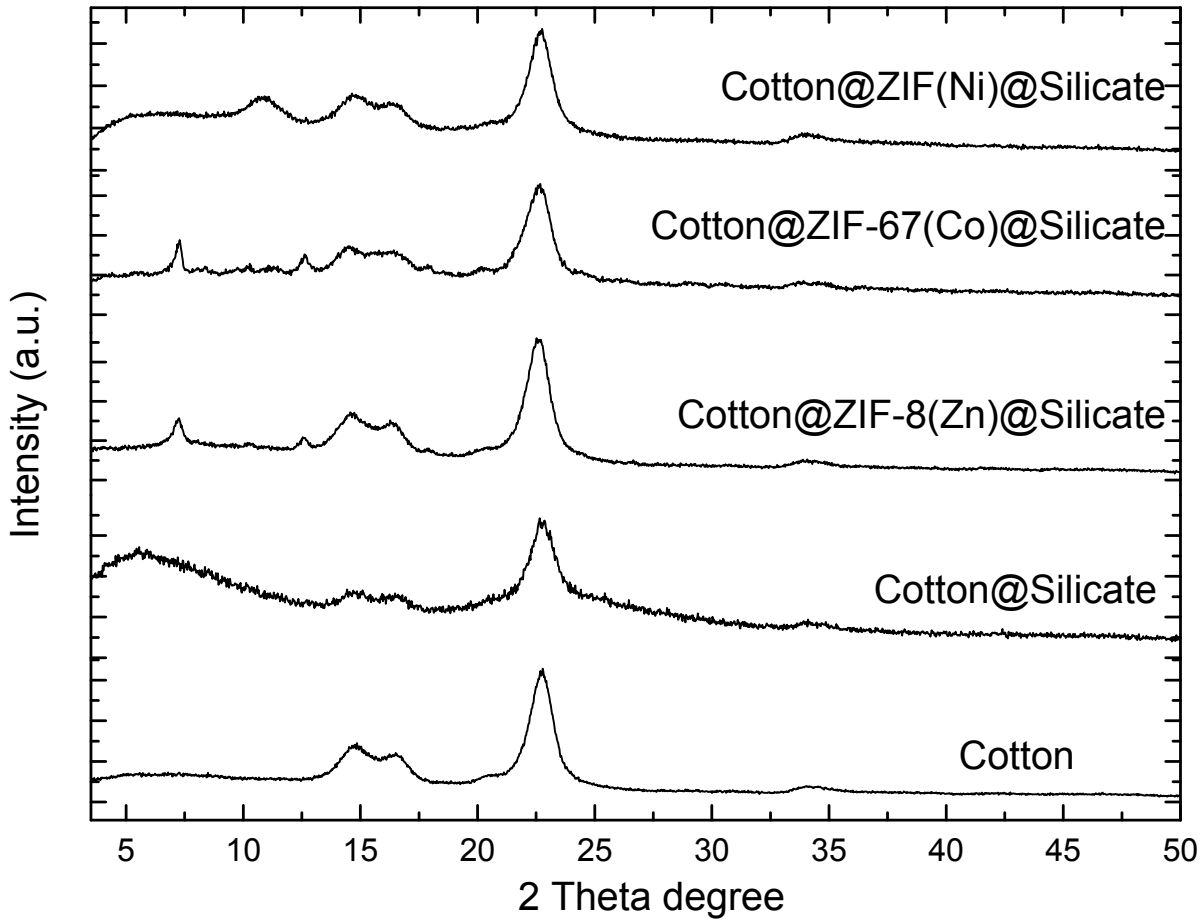


Figure S2: FTIR for Cotton fabric after modification with silicate

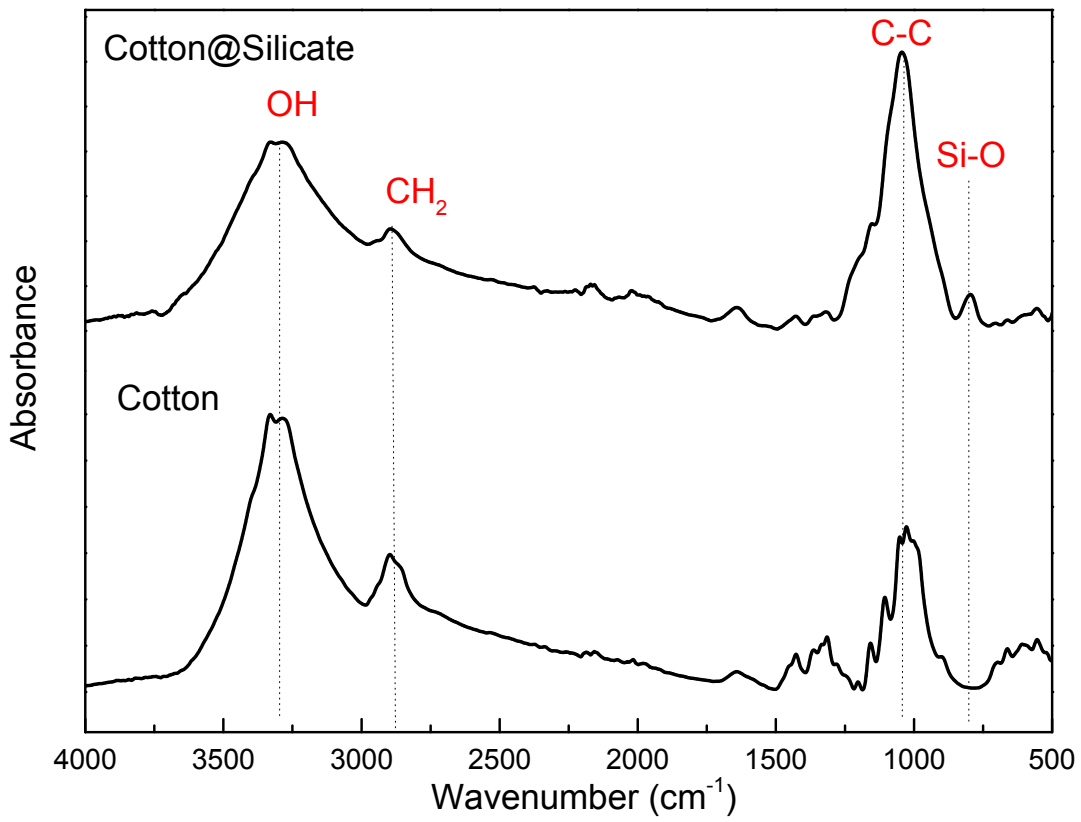


Figure S3: Absorbance spectra for the cotton fabrics before and after modification with MOFs.

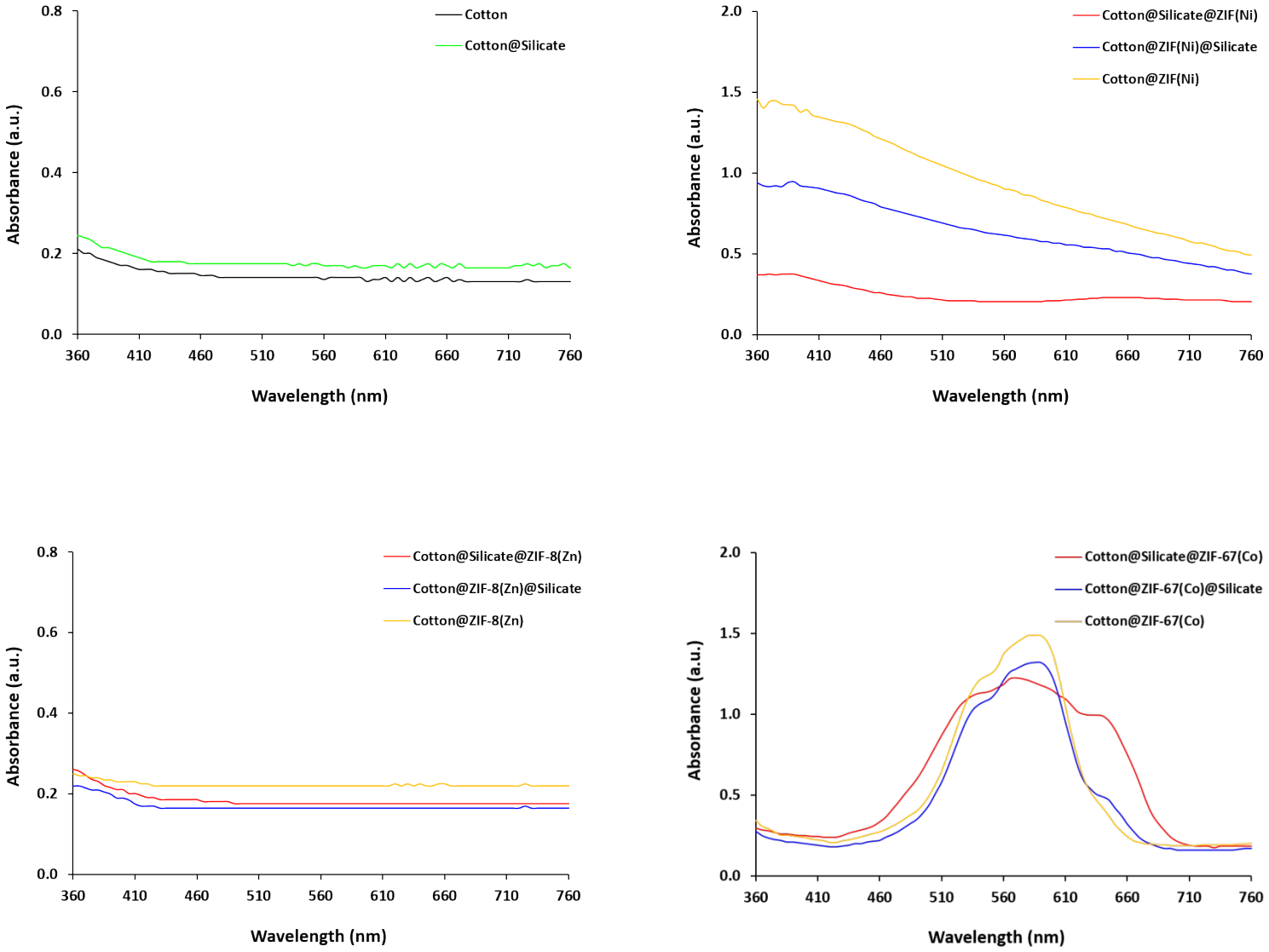
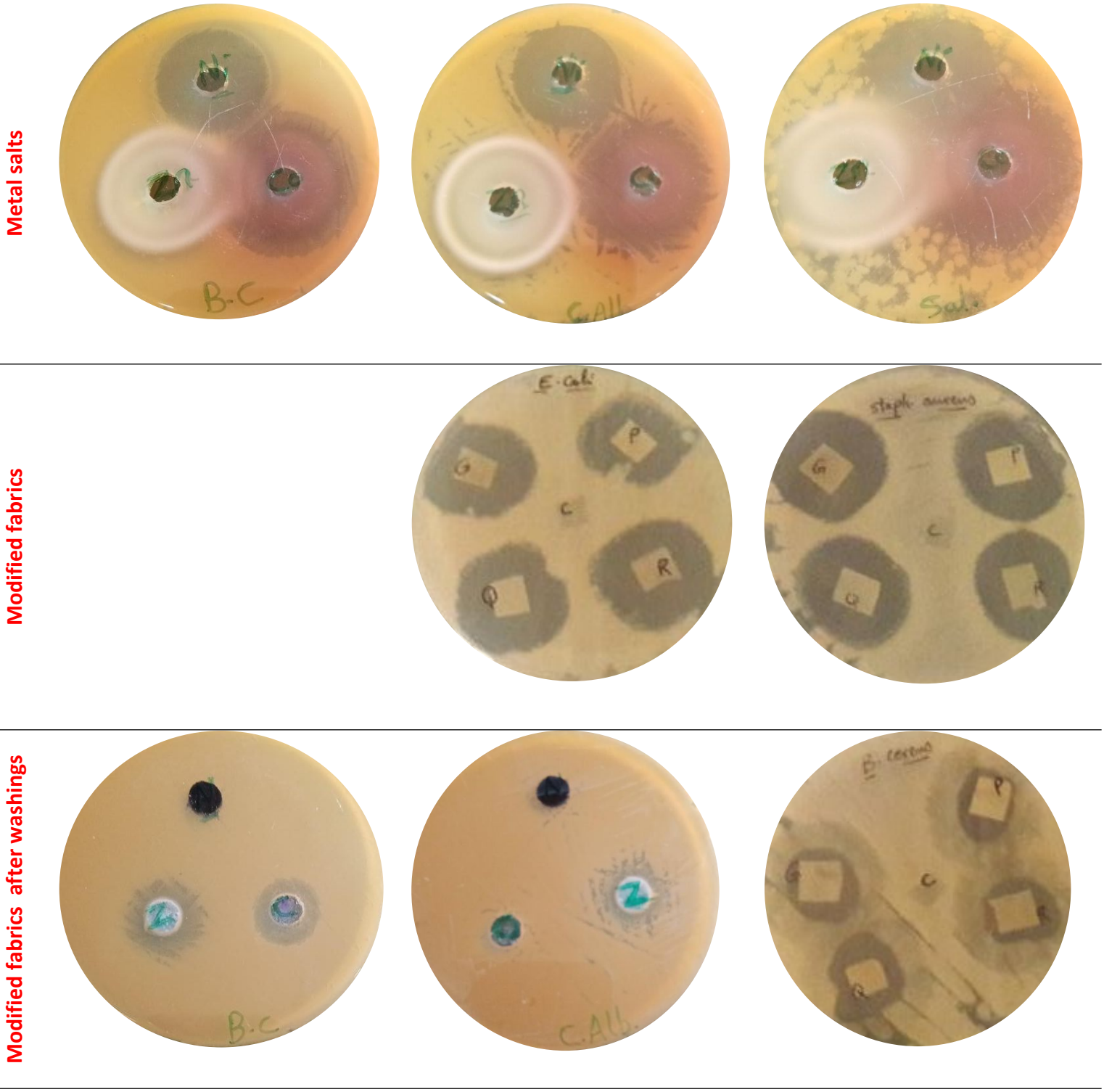


Figure S4: Photos of the antimicrobial results



The amount of ZIF onto fabrics estimated from the surface area method reported in literature [43] by using the following equation:

$$\textbf{wt. of ZIF onto fabric (\%)} = \frac{\textbf{Surface area of modified fabrics } (m^2/g)}{\textbf{Surface area for ZIF powder } (m^2/g)}$$

43. Bunge, M. A.; Davis, A. B.; West, K. N.; West, C. W.; Glover, T. G., Synthesis and Characterization of UiO-66-NH2 Metal–Organic Framework Cotton Composite Textiles. *Industrial & Engineering Chemistry Research* **2018,** *57* (28), 9151-9161.