Supporting Information

Calixarene Assisted Rapid Synthesis of Silver-Graphene Nanocomposites with Enhanced Antibacterial Activity

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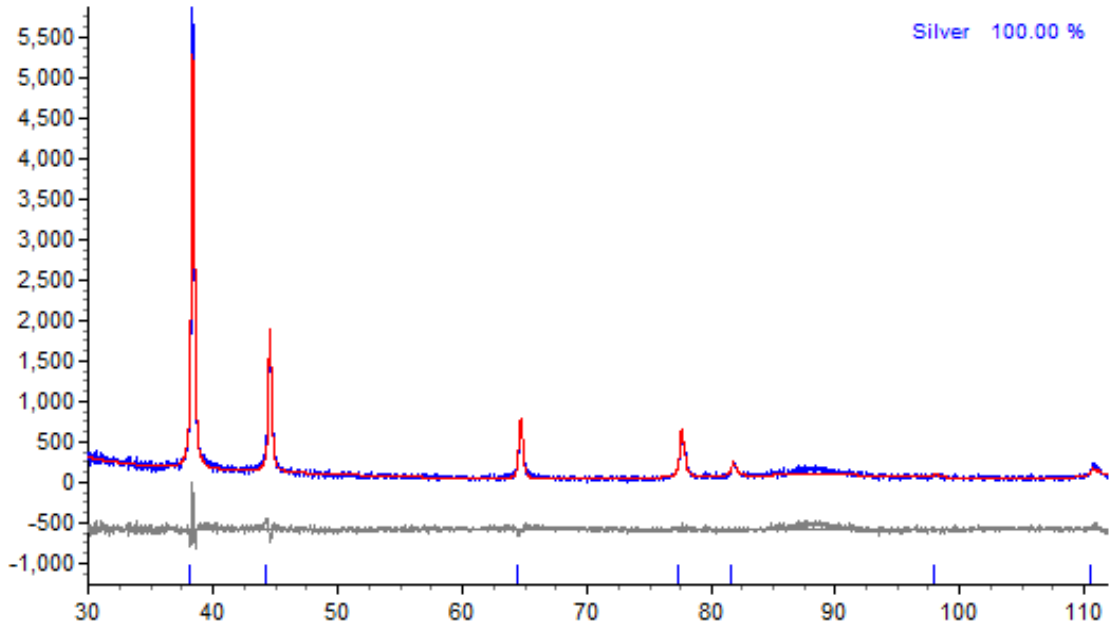

Figure S1. Rietveld refinement plot sample AgS-XC6: experimental, calculated and difference curve are in blue, red and grey respectively.

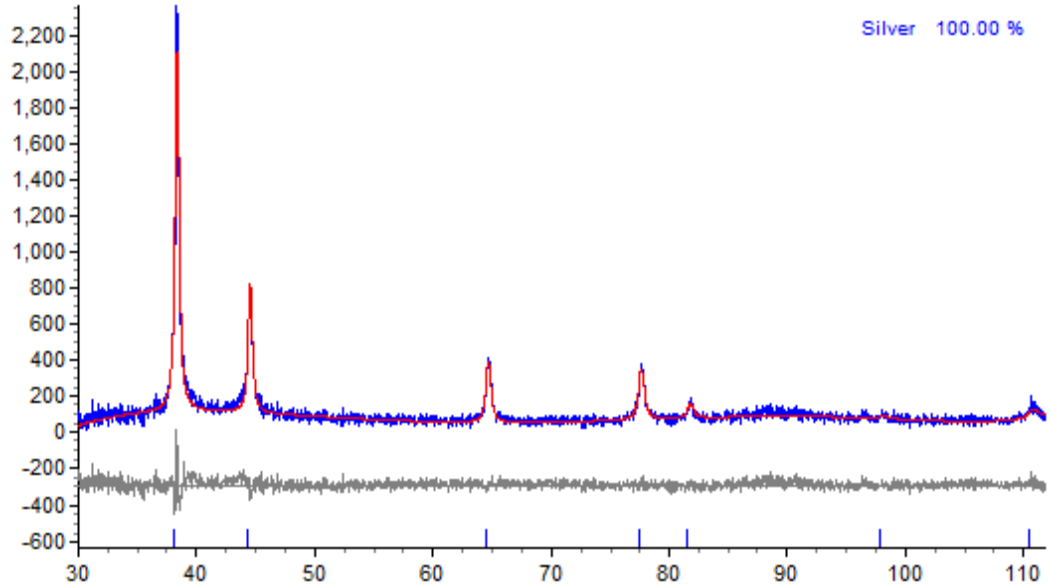

Figure S2. Rietveld refinement plot sample Ag-SCX6:GO (1:1): experimental, calculated and difference curve are in blue, red and grey respectively.

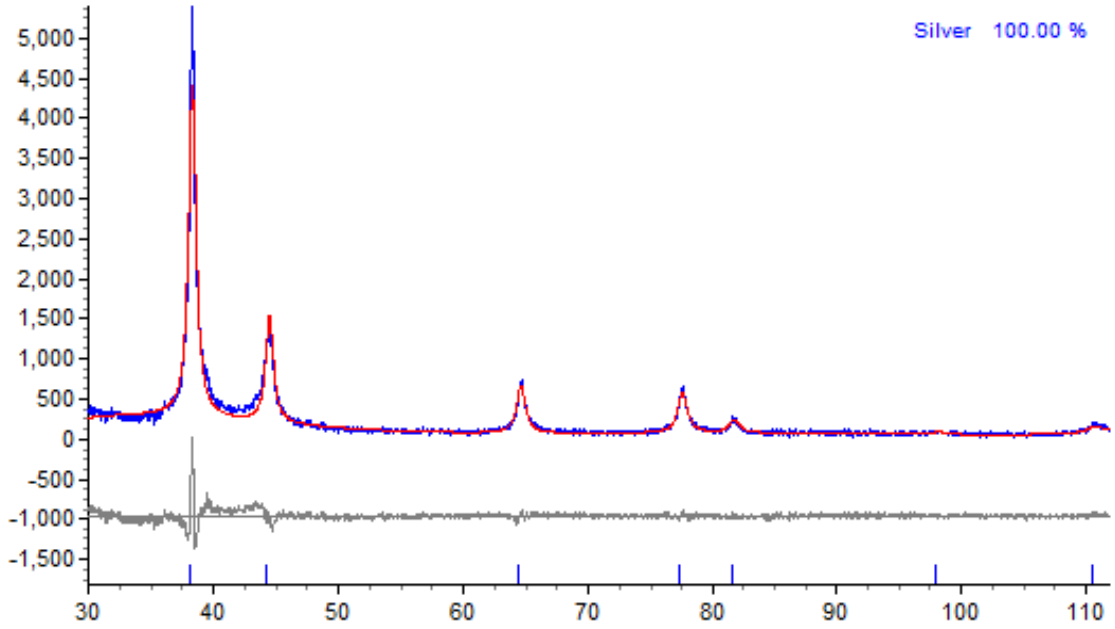

Figure S3. Rietveld refinement plot sample Ag-SCX6:GO (1:2): experimental, calculated and difference curve are in blue, red and grey respectively.

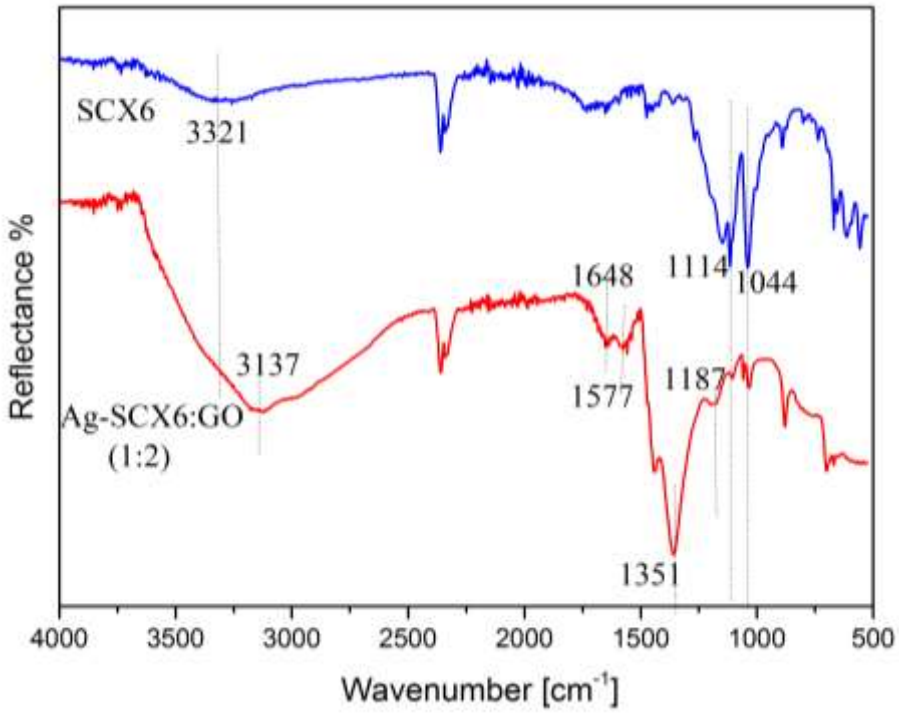

Figure S4. Representative FT-IR spectra of SCX6 and AG-SCX6:GO (1:2) revealing the presence of bands located at 1164 and 1047 cm^{-1} which can be assigned to the SO_3 groups of SCX6, also found in pure SXC6.[1,2] Additional bands located at 1351 cm^{-1} (>COO- symmetric

stretch), 1577 cm^{-1} (>C=C, skeletal vibrations of graphitic domain), 1187 cm^{-1} (symmetric stretching of epoxy groups) and the broad absorption band at 3390 cm^{-1} (O–H stretching vibration and the absorbed water molecules) are also evident.[3,4]

References:

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(2) Zhou, J.; Chen, M.; Diao, G. Calix[4,6,8]arenesulfonates Functionalized Reduced Graphene Oxide with High Supramolecular Recognition Capability: Fabrication and Application for Enhanced Host-Guest Electrochemical Recognition. *ACS Appl. Mater. Interfaces*, **2013**, 5, 828-836.

(3) Galande, C.; Mohite, A. D.; Naumov, A. V.; Gao, W.; Ci, L.; Ajayan, A.; Gao, H.; Srivastava, A.; Bruce Weisman R.; Ajayan, P. M. Quasi-Molecular Fluorescence from Graphene Oxide. *Sci. Rep.*, **2011**, 1:85, 1-5.

(4) Oh, J.; Lee, J.; Koo, J. C.; Choi, H. R.; Lee, Y.; Kim, T.; Luong N. D.; Nam, J. Graphene Oxide Porous Paper from Amine-Functionalized Poly(glycidyl methacrylate)/Graphene Oxide Core-Shell Microsphere. *J. Mater. Chem.*, **2010**, 20, 9200–9204.