Silver-Zeolite Loaded Silicone Elastomers: A Multidisciplinary Approach to Synthesis and Antimicrobial Assessment

Sama Belkhair,† Malcolm Kinninmonth,† Leanne Fisher,† Biliana Gasharova,§ Christopher M. Liauw,† Joanna Verran,† Boriana Mihailova,‡ and Lubomira Tosheva*,†

Supporting Information

Figure S1. Nitrogen adsorption/desorption isotherms at -196 °C of NaX and Ag-containing zeolites.
Figure S2. DRIFT spectra of NaX and Ag-containing zeolites.

Figure S3. Typical digital images of the functionalised Ag-zeolites dispersed in: (left) water and (right) chloroform.
Figure S4. TG/DTG curves of NaX and AgX samples. Thermogravimetric analysis was performed with a TGA4000 instrument from Perkin Elmer. Samples were heated to 900 °C at a heating rate of 10 °C min\(^{-1}\) under air.

**Ag release experiments**

For determining the amount of silver leached, 10 mL of HPLC Gradient grade water (Fisher Scientific) was placed in universals containing one of each of the silver (AgX/SE) and modified silver (M-AgX/SE and V-AgX/SE) surfaces. Surfaces were incubated at 37 °C in a reciprocating shaker at 150 rpm and at 1 h, 5 h, 24 h, 48 h and 72 h, the surfaces were transferred to a fresh universal containing HPLC grade water. Test surfaces were tested in triplicates. The samples were analyzed on a Varian Vista AX CCD inductively coupled plasma atomic emission spectrometer (ICP-AES) using the Ag 328.1 nm analytical wavelength. Silver content was calculated from calibration curves (0.01 to 2 ppm).