

Supplementary Materials

Figure S1. (A) SEM and (B) Representative EDS spectra and mapping of (C) Si, (D) O and (E) Ag elements across a fractured 10 wt% Si content cold-pressed composite before silica etching; the scale bar corresponds to 90 μm .

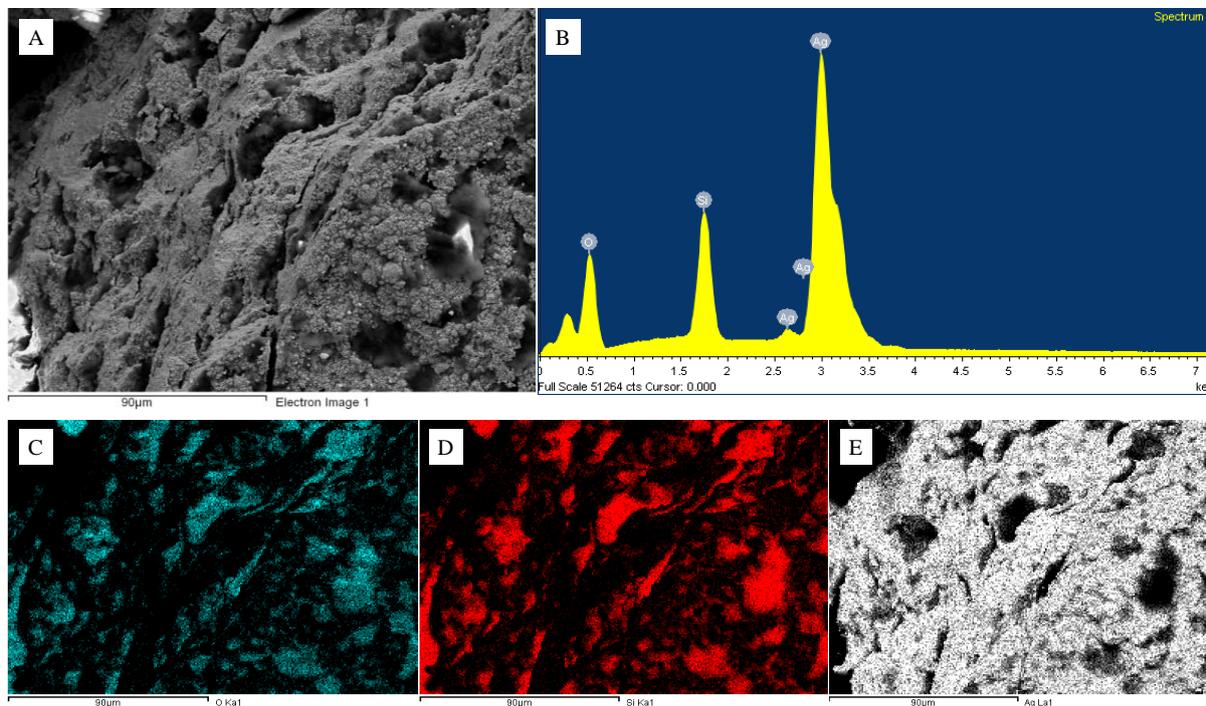


Figure S2. (A) integrated SAXS patterns for 10 and 20 wt% Si-Ag composites before and after etching and; (B) fit for the 10 wt% sample before etching log normal distribution with a dilute system structure factor and spheroid form factors; (C) residual trace for the modelling and; (D) size distribution for a log normal distribution showing a narrow distribution corresponding to the Si NPs. The samples after etching were shown to follow a Porod law suggesting.

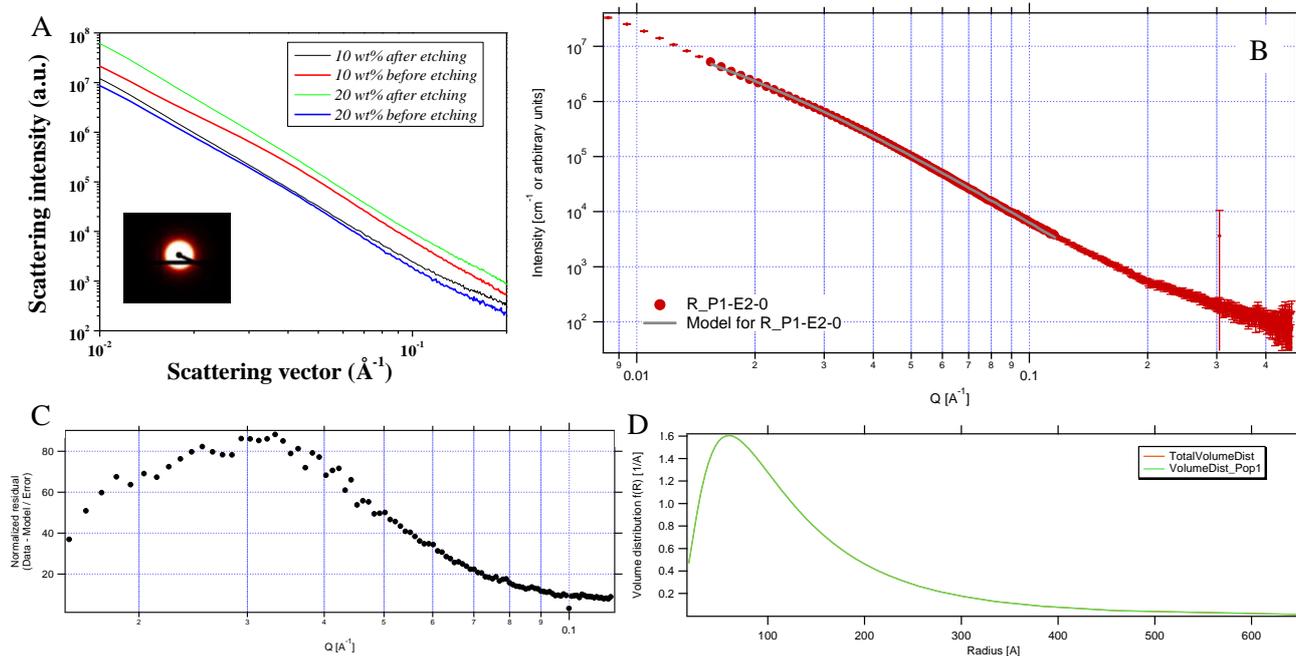


Figure S3. Relationship between weight % (wt%) and volume % (v%) for the silica silver mixtures.

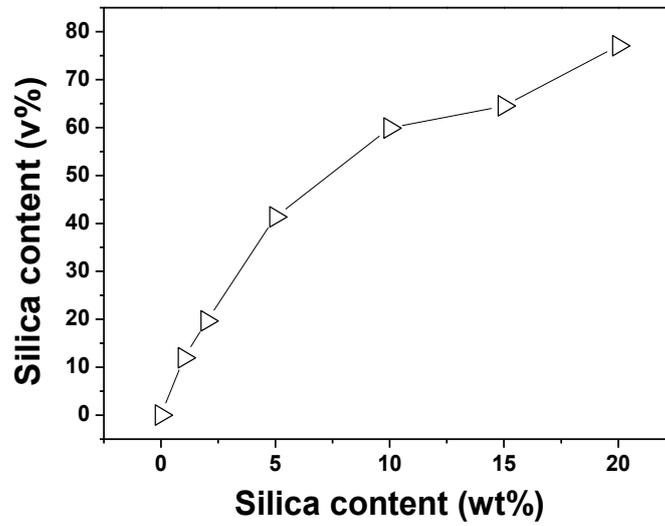


Figure S4. Pore size distribution for (A) 12, (B) 20, (C) 43 and (D) 62 v% different etched Ag thin films.

