

Electronic supplementary material

Figure S1

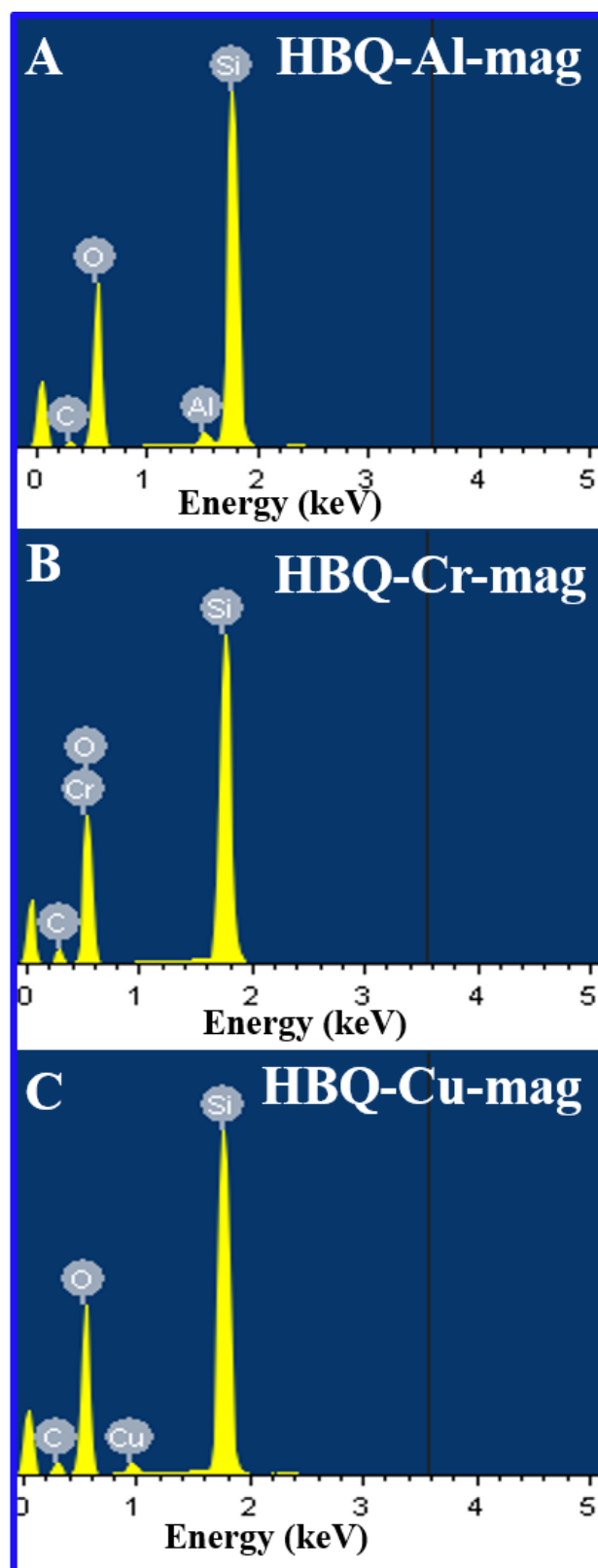


Figure S1. EDS spectra of HBQ-Al-mag (A), HBQ-Cr-mag (B) and HBQ-Cu-mag (C).

Figure S2

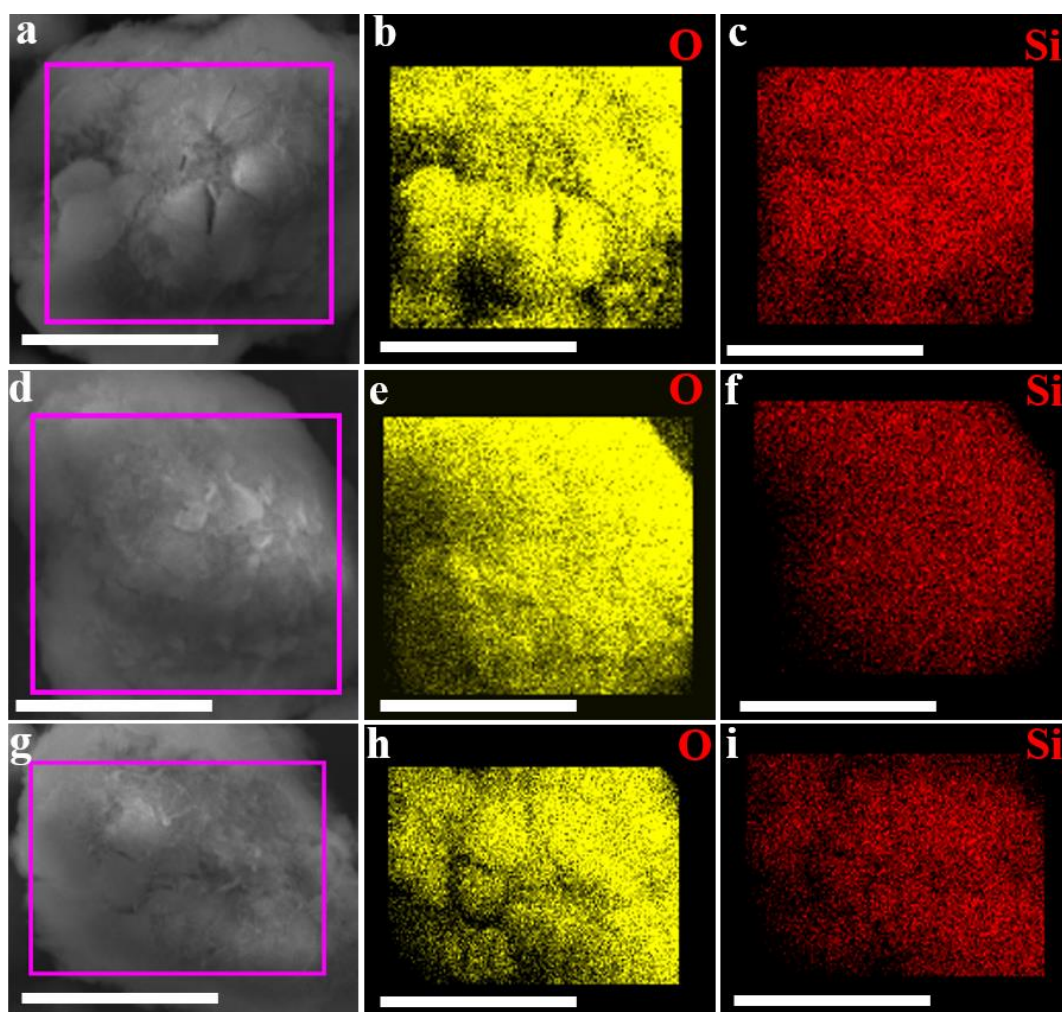


Figure S2. SEM images and their corresponding elemental mapping images of O and Si: (a-c) HBQ-Al-mag; (d-f) HBQ-Cr-mag; (g-i) HBQ-Cu-mag. The scale bar was 10 μm .

Figure S3

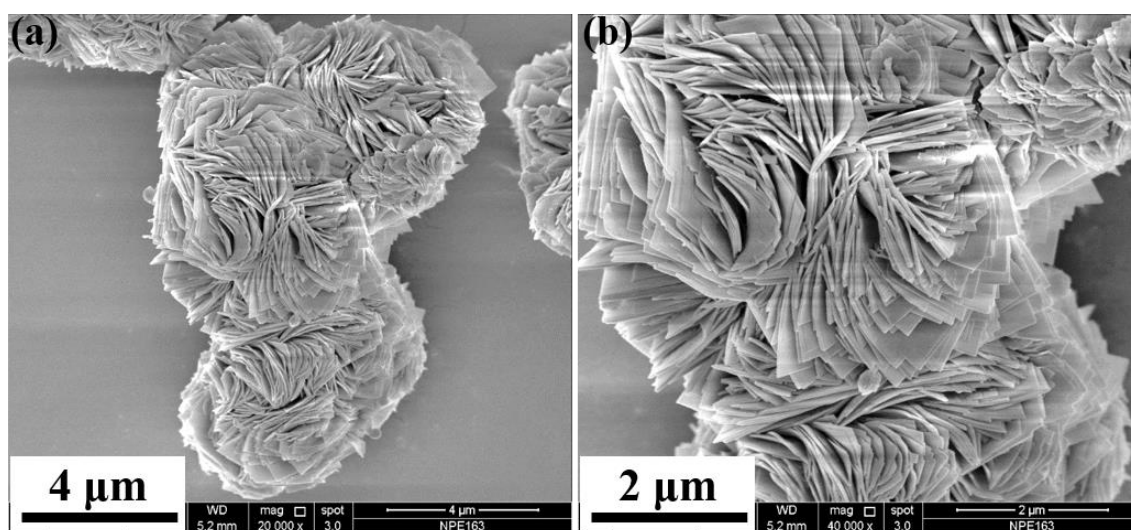


Figure S3. FE-SEM images of the starting mag.

Figure S4

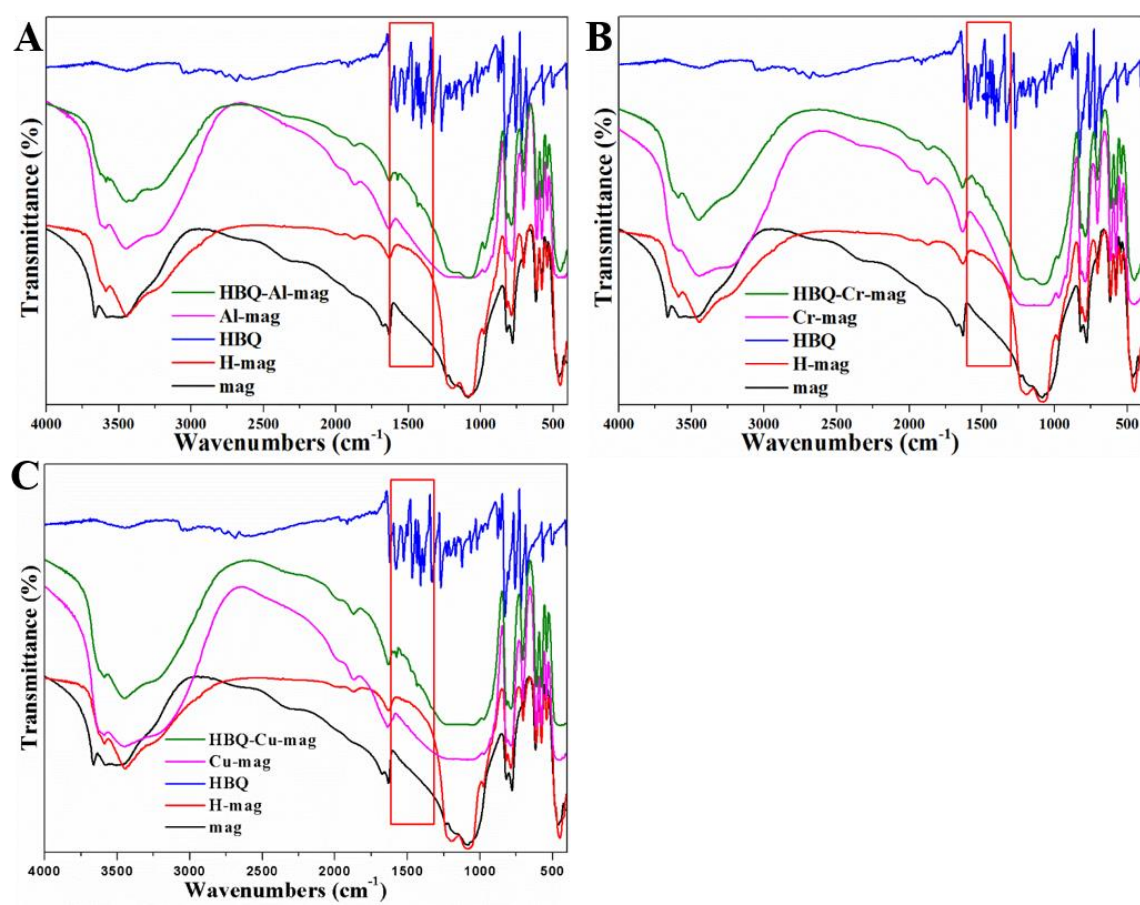


Figure S4. Comparative FTIR spectra of (A) HBQ-Al-mag series, (B) HBQ-Cr-mag series and (C) HBQ-Cu-mag series.

Figure S5

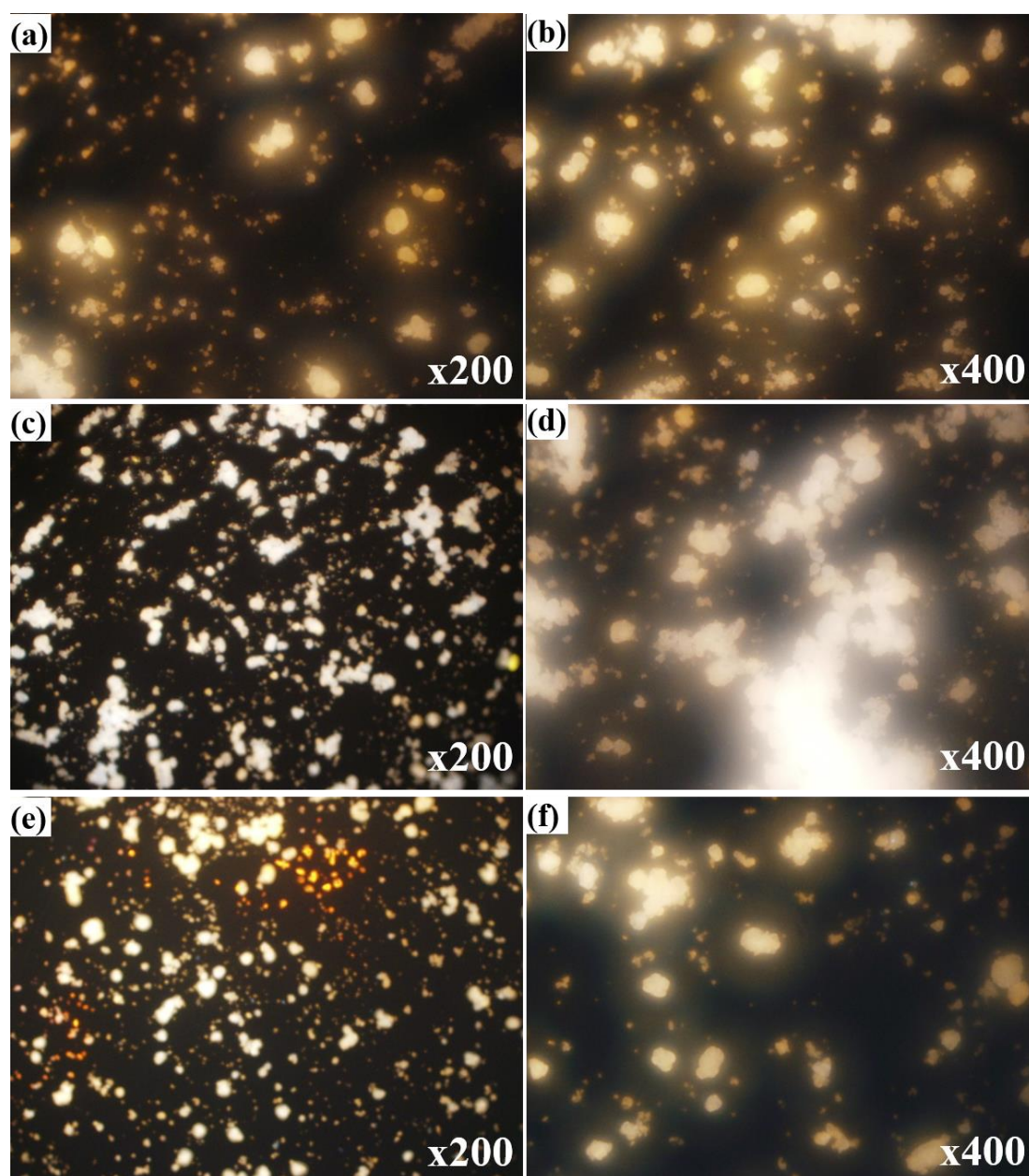


Figure S5. Inverted fluorescence microscope images of HBQ-Al-mag (a-b), HBQ-Cr-mag (c-d) and HBQ-Cu-mag (e-f) under 360 nm UV light irradiation.