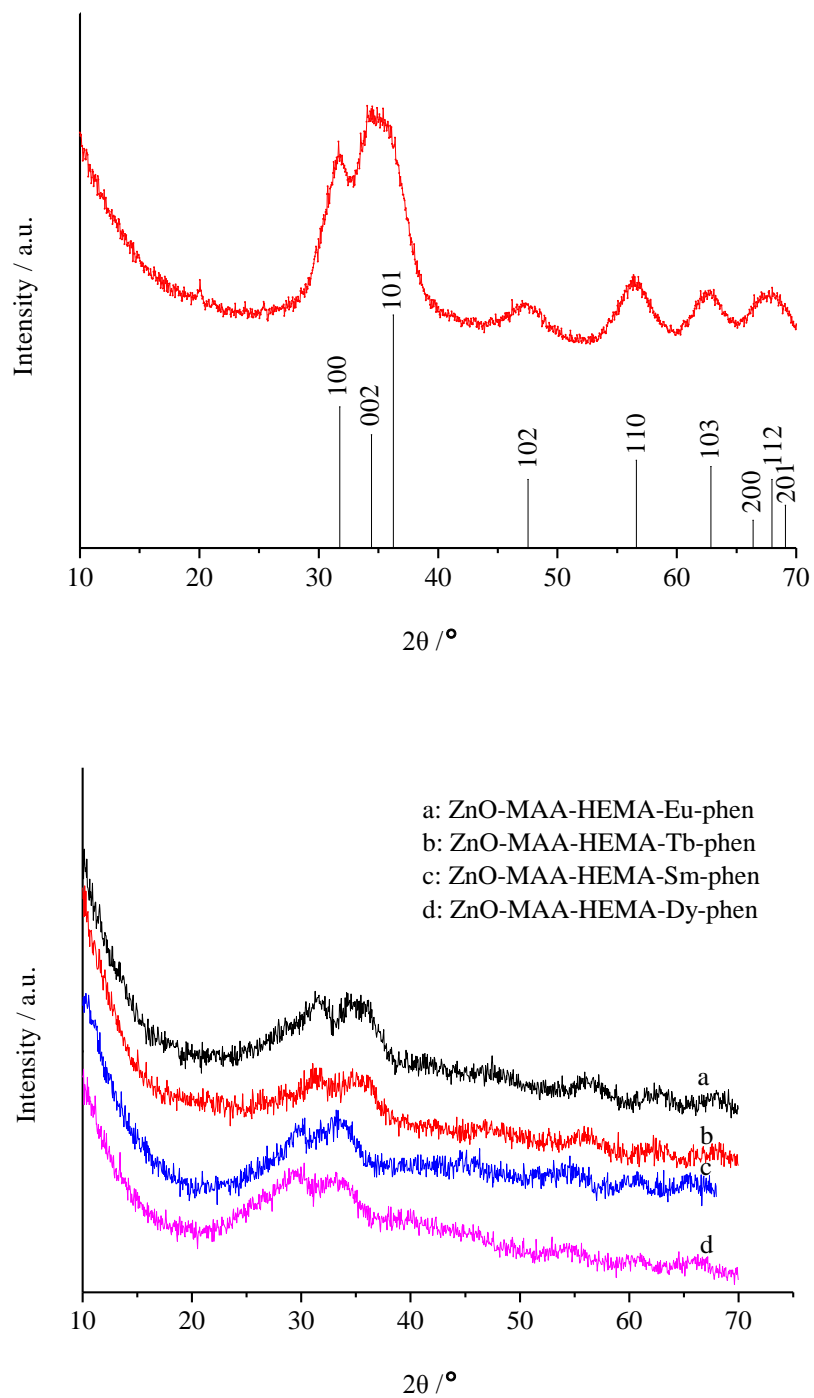
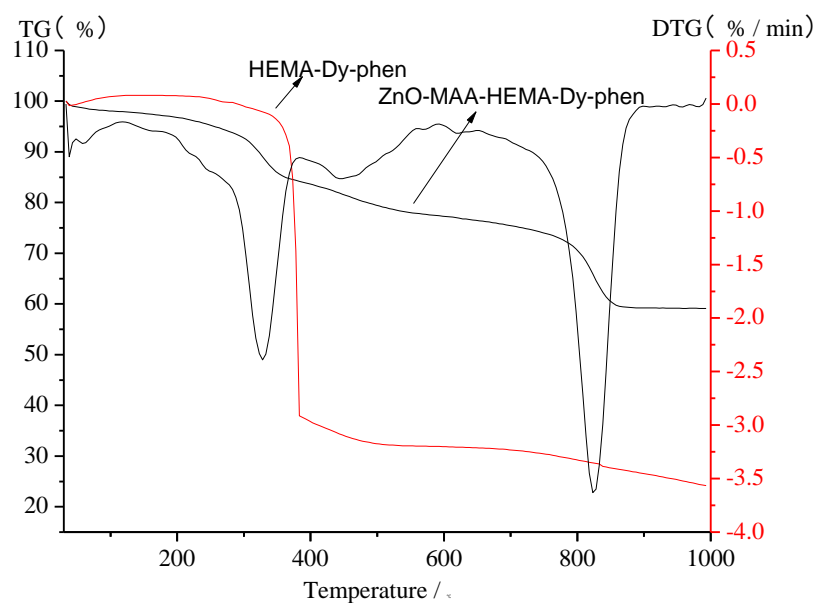
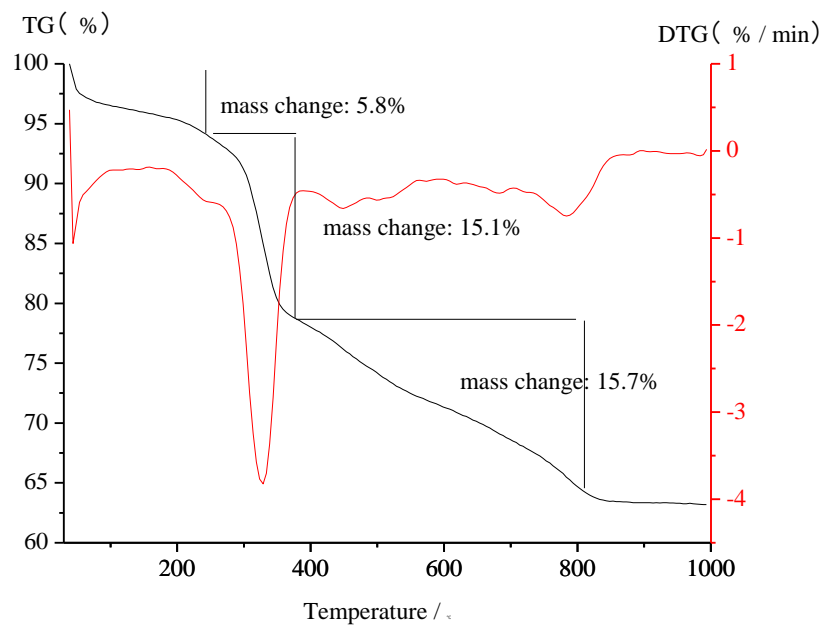


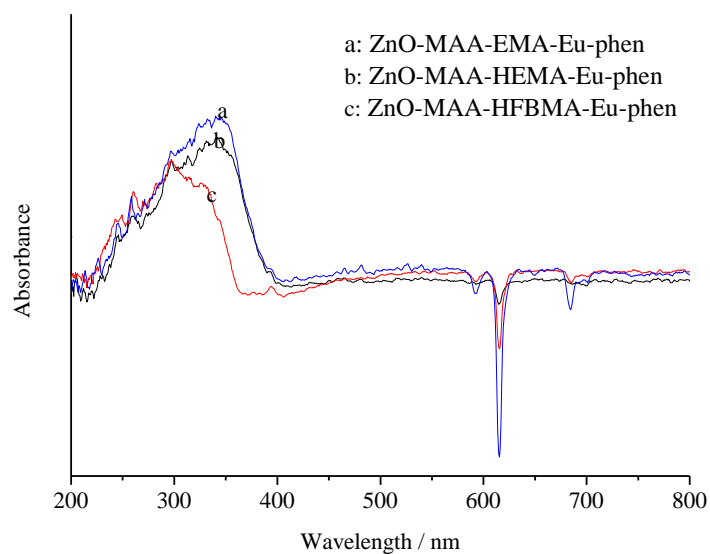
**Figure S1** FTIR spectra of precursors MMA, ZnO-MAA and phen (a) and ZnO-MAA-HEMA-RE-phen (RE = Eu, Tb, Sm, Dy) hybrids (b)



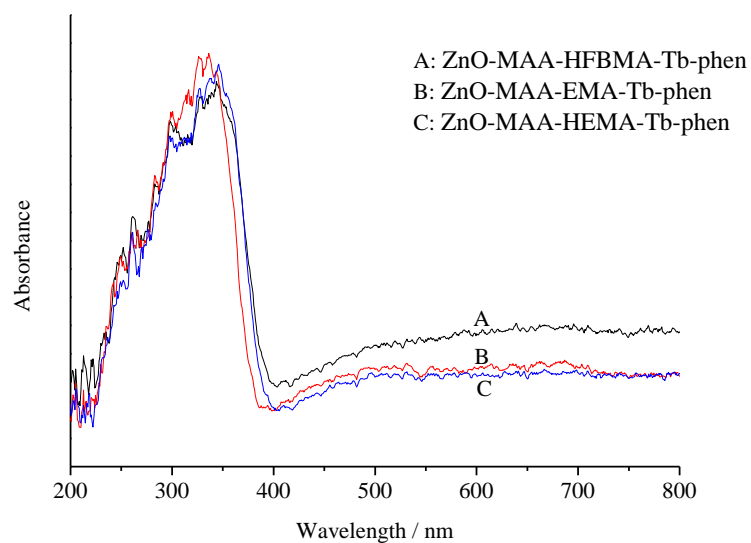
**Figure S2** X-ray diffraction pattern for ZnO-MAA (a) and the hybrids: HEMA-Eu-phen, ZnO-MAA-HEMA-Tb-phen, ZnO-MAA-HEMA-Sm-phen and ZnO-MAA-HEMA-Dy-phen (b)



**Figure S3** Selected TG and DTG curves of ZnO-MAA-HFBMA-Tb-phen (a) and ZnO-MAA-HEMA-Dy-phen (b) hybrids



**Figure S4** Ultraviolet-visible diffuse reflection absorption spectra of ZnO-MAA-EMA-Eu-phen, ZnO-MAA-HEMA-Eu-phen and ZnO-MAA-HFBMA-Eu-phen



**Figure S5** Ultraviolet-visible diffuse reflection absorption spectra of ZnO-MAA-EMA-Tb-phen, ZnO-MAA-HEMA-Tb-phen and ZnO-MAA-HFBMA-Tb-phen