promote the gene expression of osteoblasts (Clupper et al., 2003). In order to increase their surface areas and pore volumes, MBG nanofibers have been fabricated by a combination of structure-direction agents and electrospinning techniques (Huang et al., 2012).

Since the electrospinning method was first explored in the 1930s (Formhals, 1934), it has been widely used to synthesize different fibers including organic, inorganic, and organic-inorganic hybrid composites (Bai et al., 2017; Li et al., 2017; Jia et al., 2015). Huang et al. (2012) have fabricated luminescent, mesoporous, and bioactive glass nanofibers doped with Eu^{3+}/Tb^{3+} by using the electrospinning technique, as shown in Fig. 4.2. The pluronic P123 and CTAB as

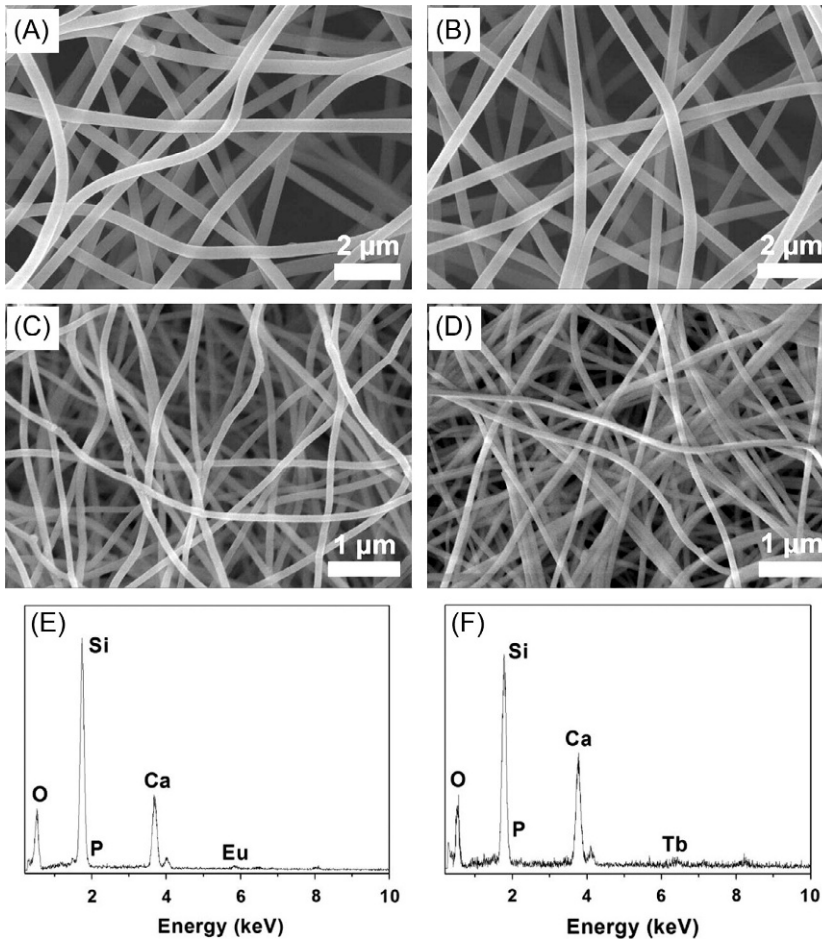

FIG. 4.2 SEM images of the precursor of (A) MBGNF:$Eu3^{+}$ and (B) MBGNF:Tb^{3+}; calcined samples: (C) MBGNF:Eu^{3+}, and (D) MBGNF:Tb^{3+}; and EDX patterns of calcined samples: (E) MBGNF:Eu^{3+} and (F) MBGNF:Tb^{3+} (Huang et al., 2012).