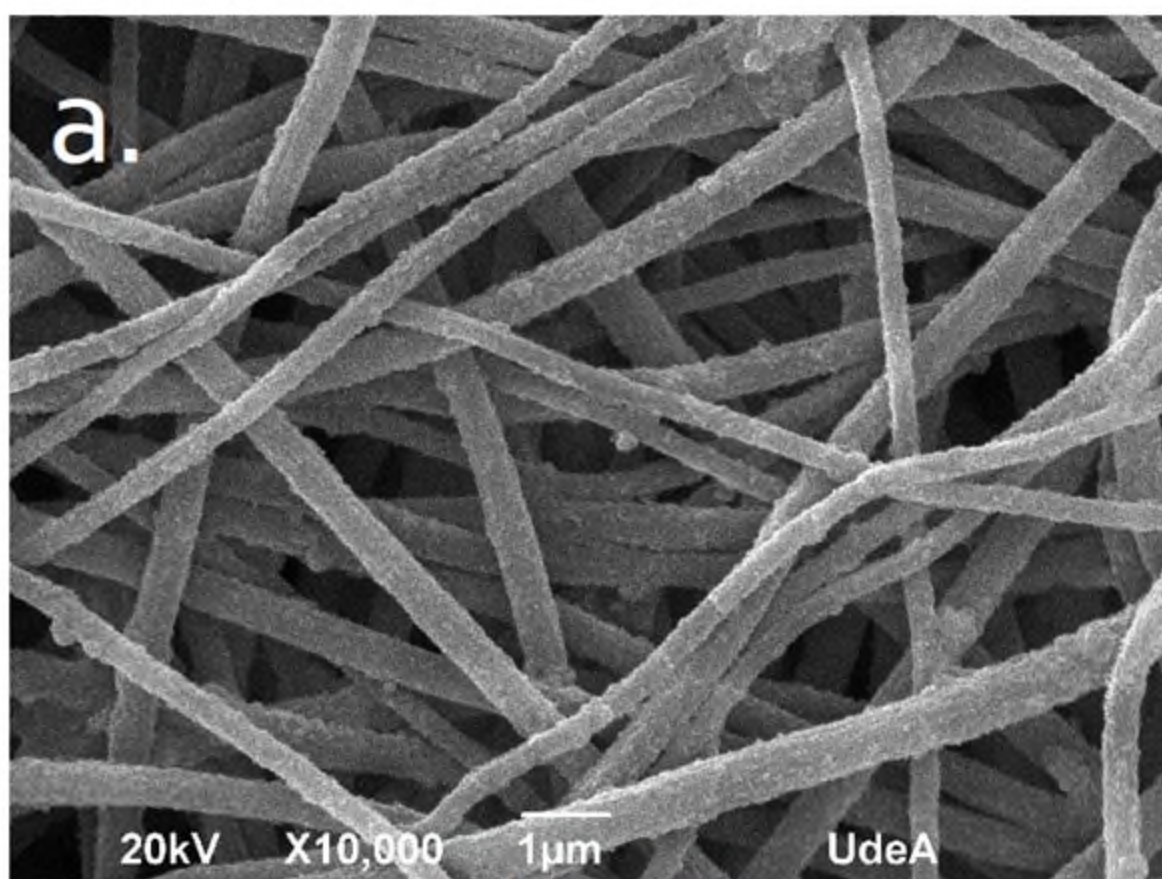
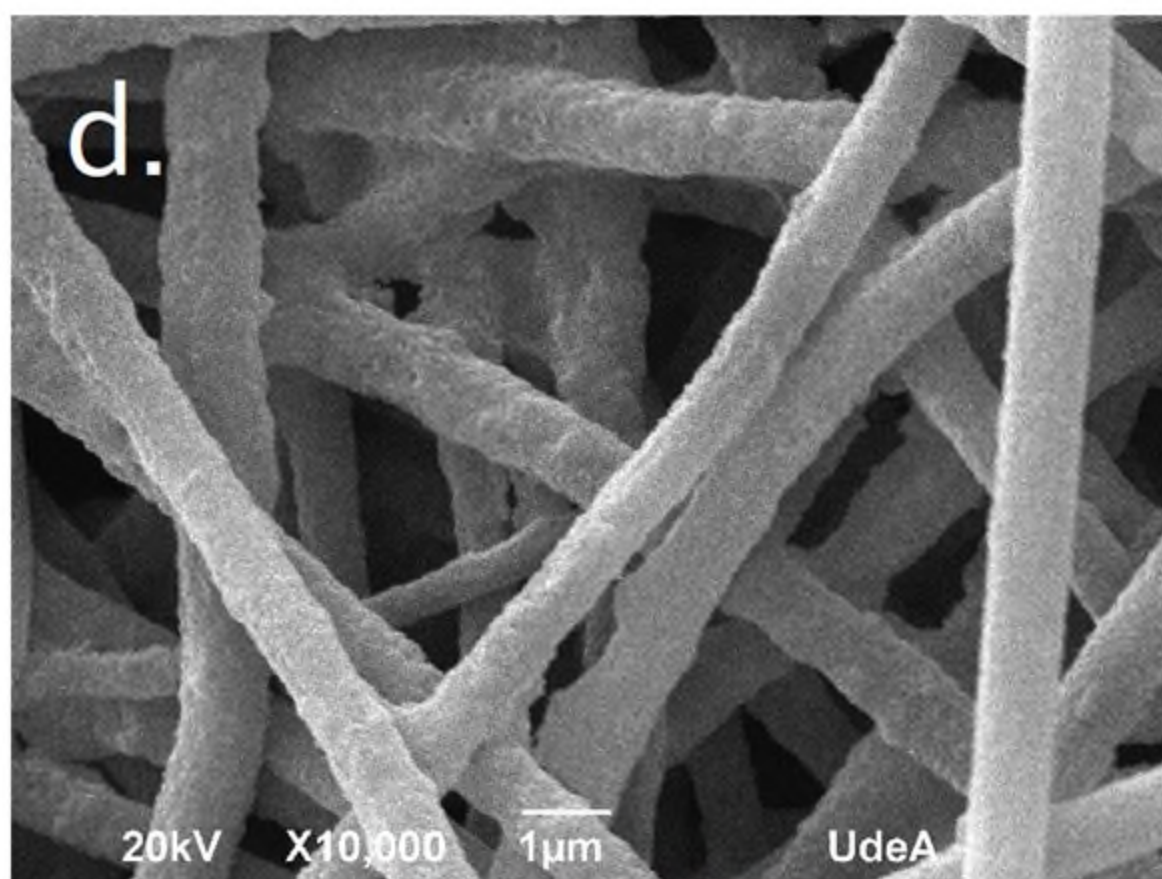




PAN + sol-gel TiO_2

FIG. 1



PAN + sol-gel $\text{TiO}_2\text{-CeO}_2$ 5%

FIG. 2