CHAPTER V
CONCLUSIONS

The PAN electrospun fibers obtained from this work have a diameter ranging from ca. 69 to 730 nm. The parameters that affect the fiber morphology are solution properties including concentration, surface tension, viscosity and conductivity. For reducing the fiber diameter, applied voltage and nozzle radius should be reduced while take-up speed and collection distance should be increased. The fiber alignment could be improved by increasing take-up speed of rotational collector. The chemical reaction during heat treatment of electrospun PAN was similar to the conventional PAN fiber. However, since the stabilization reaction was faster in electrospun PAN fiber than in conventional one, it required lower energy than conventional PAN fiber. The carbon fibers obtained have diameter of ca. 250 nm.