

## Supporting Information

### Preparation of innovative series of respiratory nano-filters using polystyrene fibrous film containing KCC-1 dendrimer and ZnO nanostructures for environmental assessment of SO<sub>2</sub>, NO<sub>2</sub> and CO<sub>2</sub>

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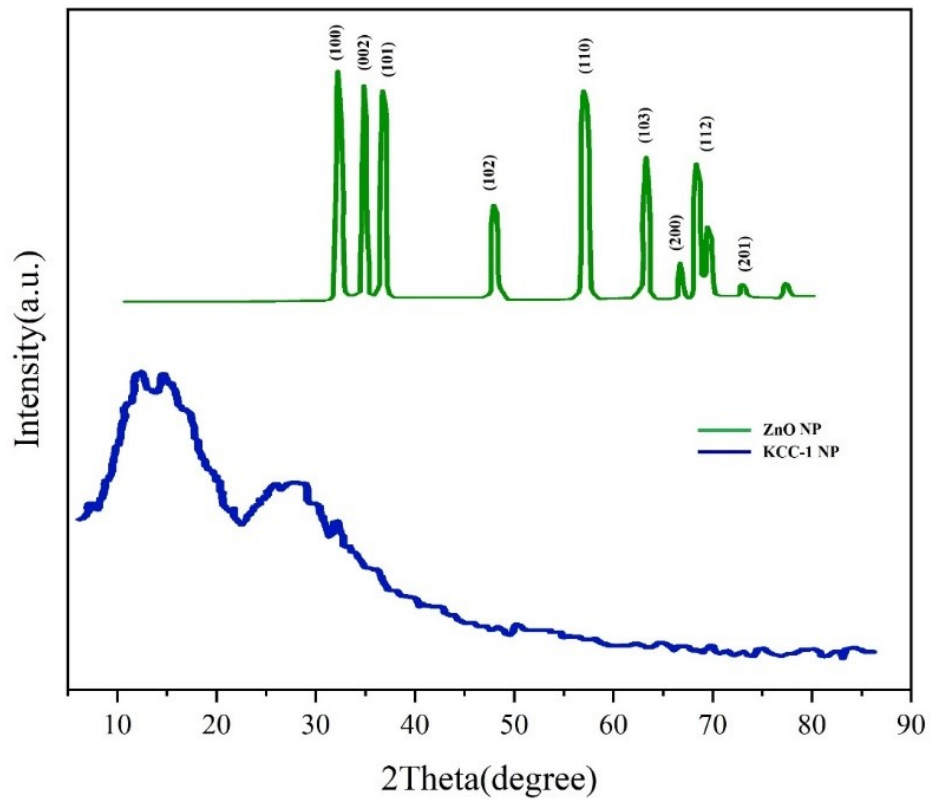
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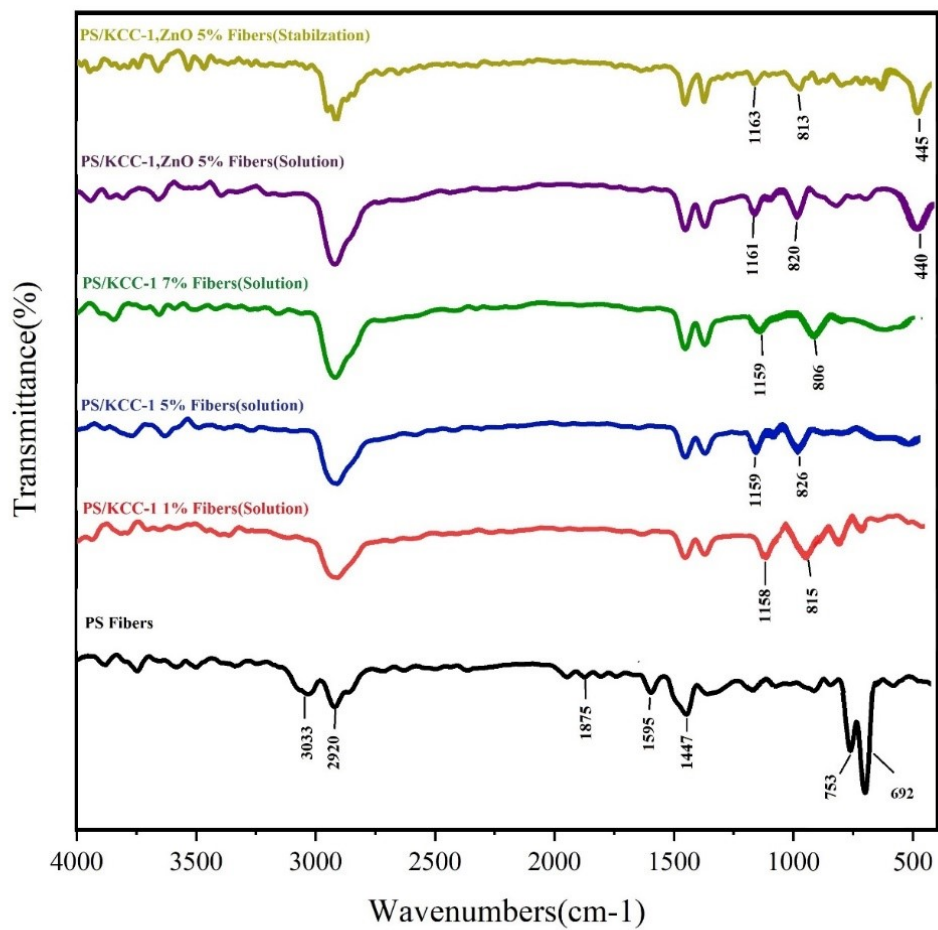
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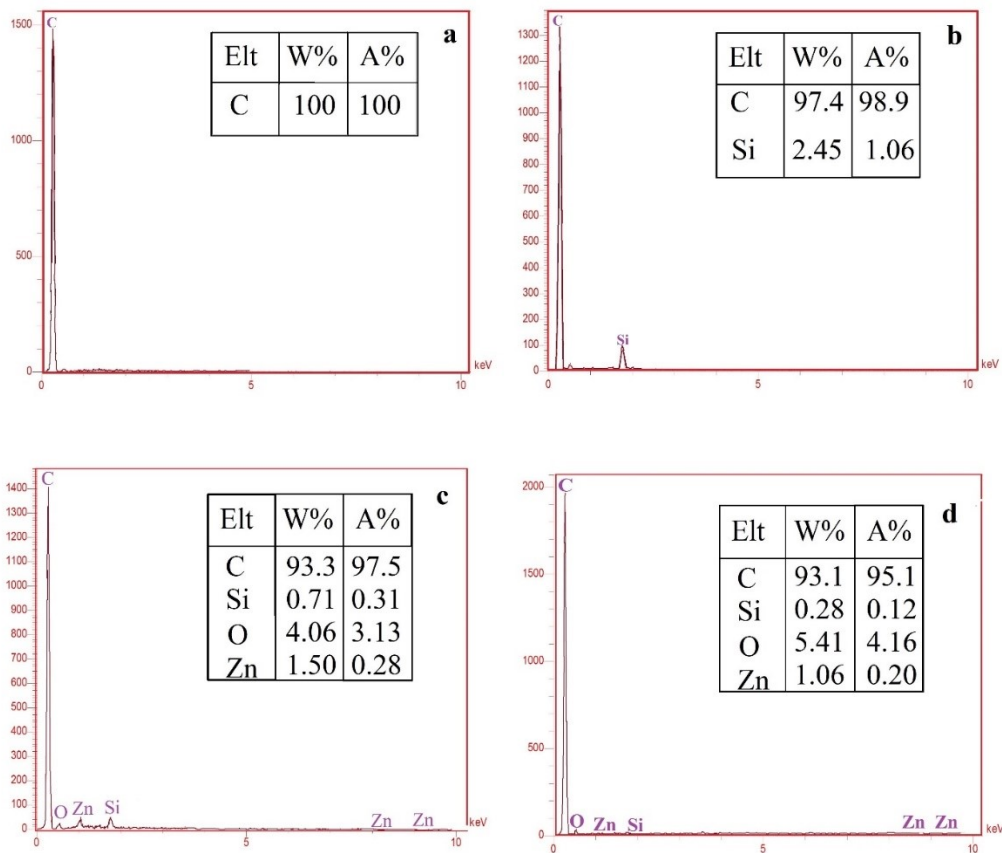
Tel: +98(44) 32752741.



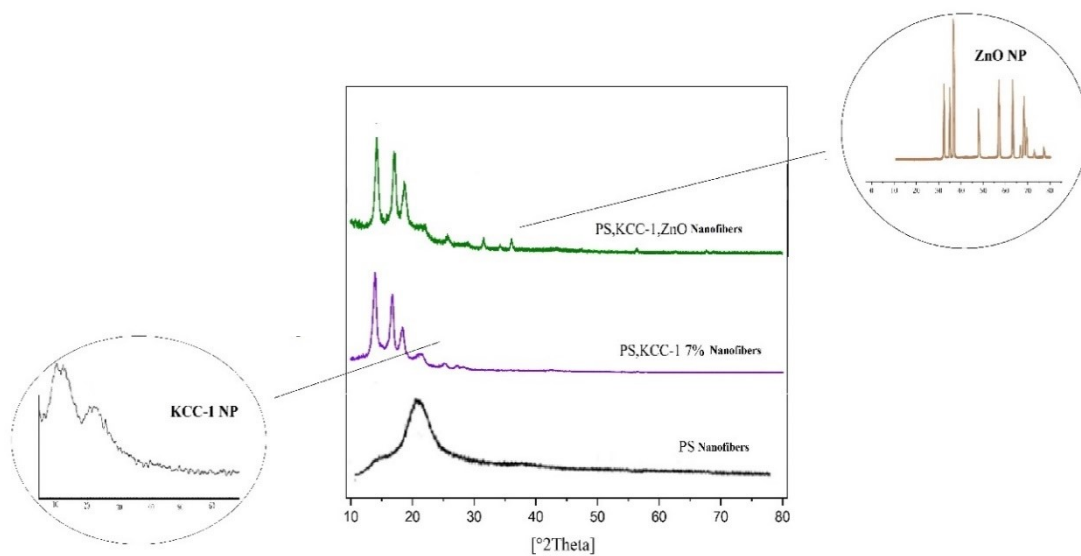
**Figure S1.** XRD patterns of KCC-1 NP and ZnO NP.



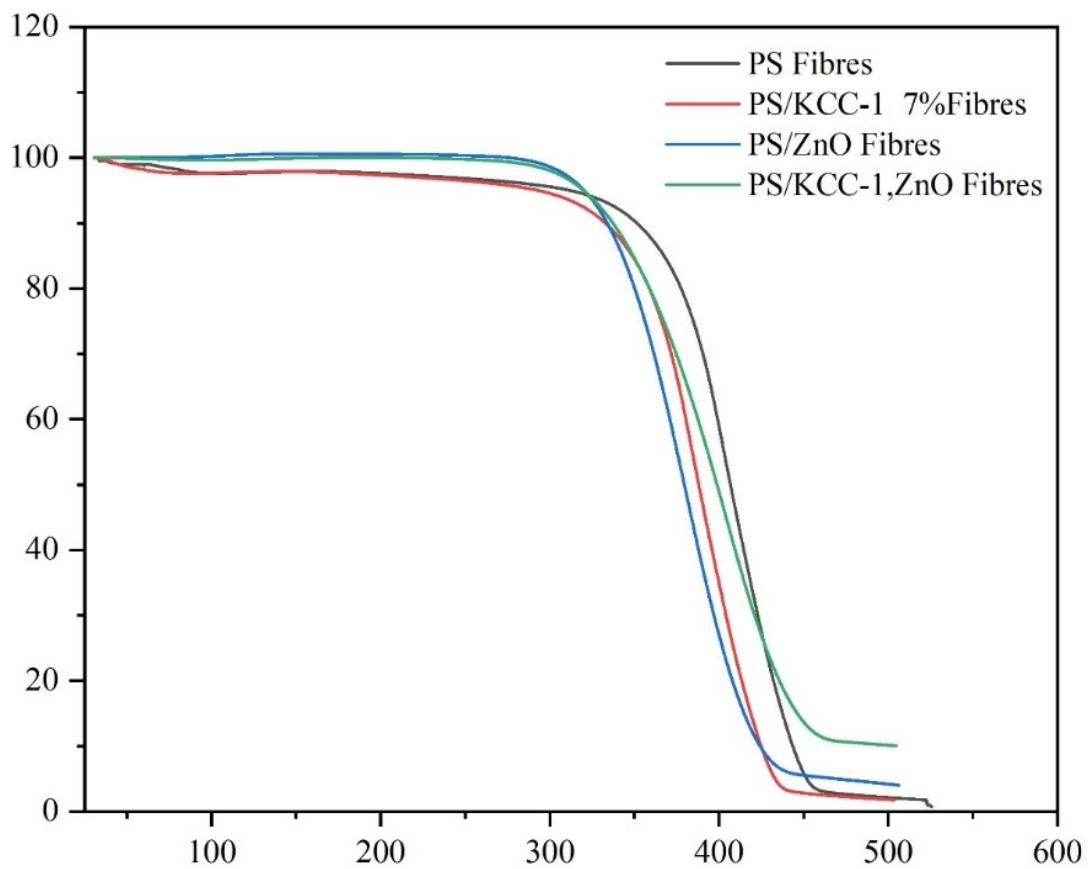
**Figure S2.** FT-IR spectra of PS fibers and PS-nanocomposite fibers.



**Figure S3.** EDX spectrum of (a) PS fibers, (b) PSLKCC-1 7% fibers solution, (c) PS/KCC-1, ZnO 5% fibers solution (d) PS/KCC-1, ZnO 5% fibers stabilize.



**Figure S4.** XRD patterns of PS fibers and PS- nanocomposite fibers.



**Figure S5.** TGA curves of PS fibers and PS-nanocomposite fibers.