

Two and Three Layer Lamination of Nanofiber

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Abstract : For their exceptional properties nanofibers, respectively, nanofiber layers are achieving an increasingly wider range of uses. Nowadays nanofibers are used mainly in the field of air filtration where they are removing submicron particles, bacteria, and viruses. Their efficiency is not changed in time, and the power consumption is much lower than that of electrically charged filters. Nanofibers are primarily used for converting and storage of energy in both air and liquid filtration, in food and packaging, protecting the environment, but also in health care which is made possible by their newly discovered properties. However, a major problem of the nanofiber layer is practically zero abrasion resistance; it is, therefore, necessary to laminate the nanofiber layer with another suitable material. Unfortunately, lamination of nanofiber layers is a major problem since the nanofiber layer contains small pores through which it is very difficult for adhesion to pass through. Therefore, there is still only a small percentage of products with these unique fibers 5.

Keywords : nanofiber layer, nanomembrane, lamination, electrospinning

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