



Supplementary Materials

Table S1. Physical Properties of a Test Filter

Properties	Value
Mean fiber diameter, d_f [μm]	2.73
Geometric standard deviation of the fiber diameter, σ_g [-]	1.39
Inhomogeneity factor, δ [-]	1.88
Filter thickness, L [μm]	238
Fiber density, ρ_f [g/cm^3]	0.92
Filter packing density, α [-]	0.084

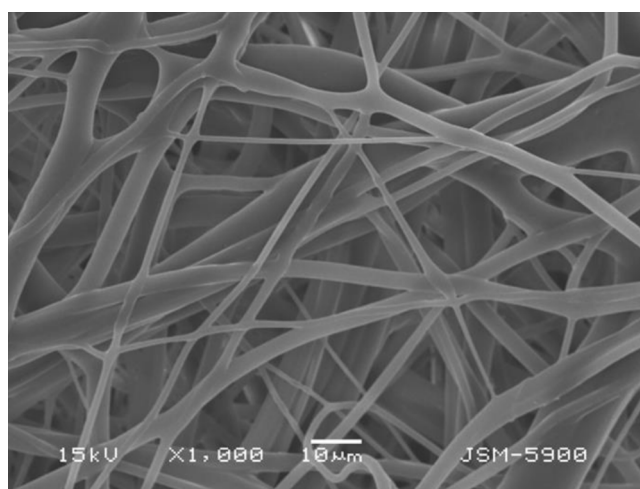


Fig. S1. SEM image of a test filter.

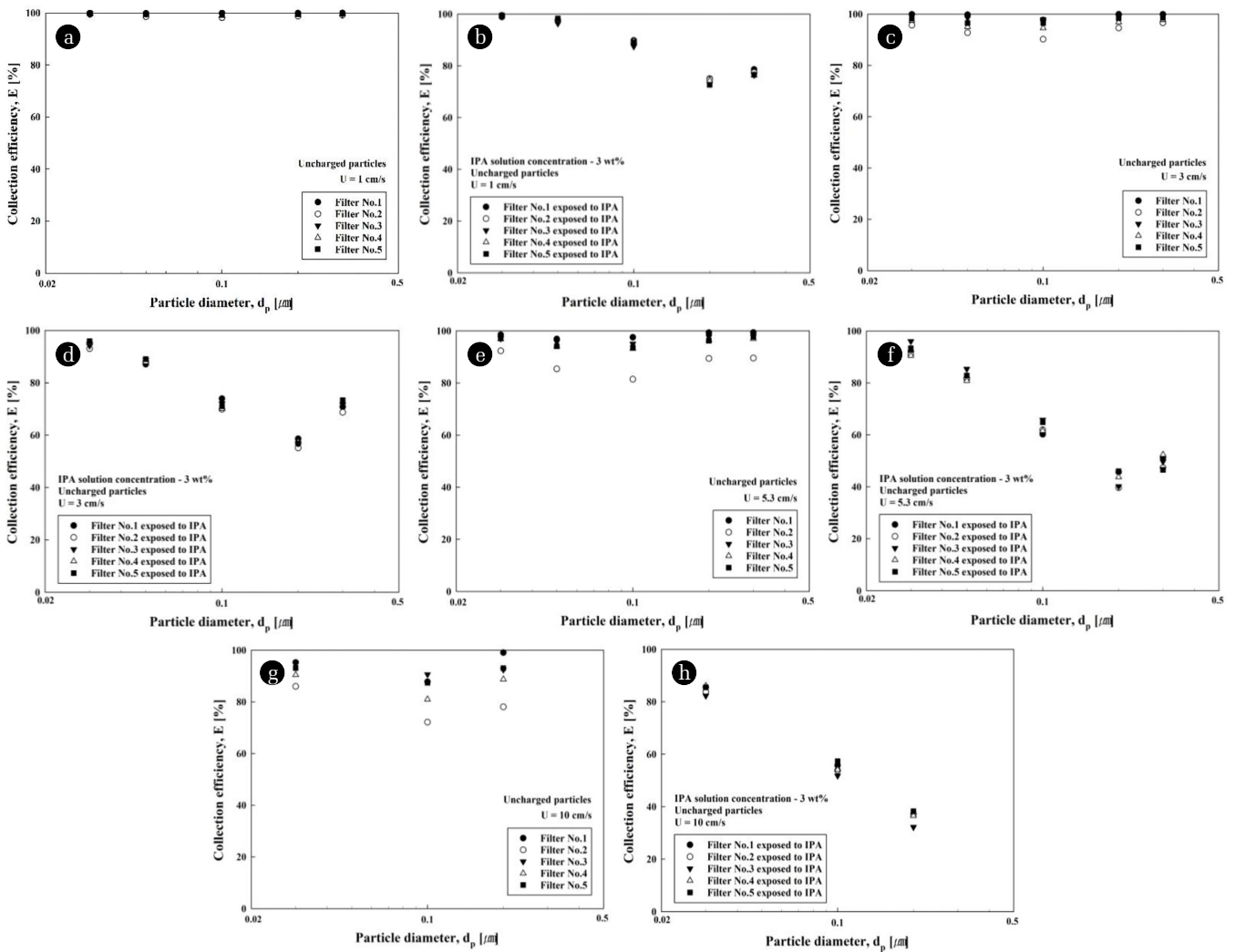


Fig. S2. Collection efficiencies of the electret and IPA exposed filters for uncharged particles at various filtration velocities.

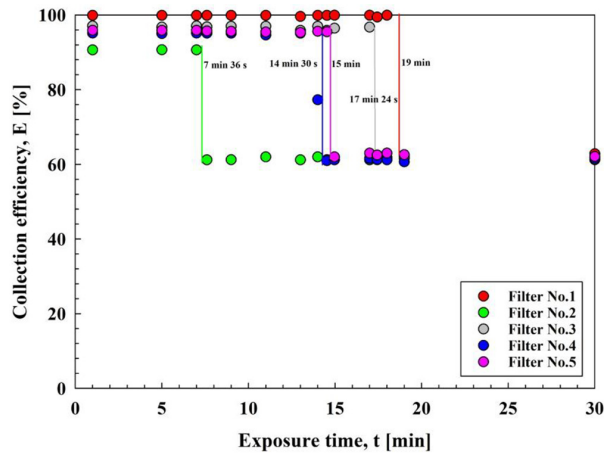


Fig. S3. Changes in the collection efficiencies of the test filters with different surface charge densities based on the IPA exposure time.