Title (en)

NOVEL METHODS AND APPARATUS FOR IMPROVED FILTRATION OF SUBMICRON PARTICLES

Title (de)

METHODE UND APPARAT ZUR FILTRATION VON KLEINSTPARTIKELN

Title (fr)

NOUVEAUX PROCEDES ET APPAREIL DE FILTRATION AMELIOREE DE PARTICULES SUBMICRONIQUES

Publication

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Application

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Abstract (en)

[origin: WO0013764A1] The subject invention pertains to novel methods of filtration, novel methods for production of filters, and novel filters, for the efficient filtration of particles. The materials and methods of the subject invention are particularly advantageous for the filtration of submicron particles, for example, nanoparticles, and can utilize the electrostatic attraction between particles and the fibers of microporous filters, for example, polypropylenefilters. The subject methods of filtration can lower the energy barrier between the particles and the filter surface and thus increase the deposition of particles on the surface of the filter. The methods and apparatus of the subject invention can be used to filter particles from many fluids including water and air. Advantageously, the subject surface modified filters can result in increased fluid flow, for the same pressure drop, compared to conventional filters.

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