

FLUID AND PARTICLE TRANSPORT THROUGH FIBROUS MEDIA AND FIBROUS COATINGS

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This presentation reviews the current state of the art in performing computationally-inexpensive simulations of fluid and particle transport in fibrous media. The presentation starts with a discussion on multiscale modeling of aerosol filtration under dust-loaded conditions and moves on to fluid absorption and fluid drainage in hydrophilic fibrous media. Included in the presentation, is also an in-depth discussion of modeling superhydrophobic fibrous coatings for self-cleaning and related applications.