

FDRG Seminar

Quantification of droplet detachment forces from filters and fibres using atomic force microscopy

presented by

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Fibrous filtration is one of the basic processes in the field of vapor liquid separation. Liquid aerosol particles which are impacting the fibres during filtration processes are generally able to spread out and form thin films on the fibre, which typically break up into arrays of droplets by Plateau-Rayleigh instability. Droplets can merge and form larger drops or liquid reservoirs within the filter. They do not necessarily remain in their initial position, as they can move along a fibre or even detach and reentrain into the aerosol current. In spite of the significance of this important technique in industry and science, the nature of randomly orientated fibre filters is not completely understood so far. In order to develop a better comprehension of the interfacial forces in filtration processes, this work presents an approach to determine detachment forces of coalesced droplets from fibres using atomic force microscopy.

Date: Friday 17th April
Time: 4pm – 5pm
Location: 216:207
Curtin University, Bentley Campus

No RSVP required. For queries please email:
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