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Characterisation of porous alumina membranes for efficient, real-time, flow through biosensing

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Abstract: Nano fluidic sensing devices promise high performance by overcoming issues of mass transport of analyte molecules to the sensing surface, whilst microporous membranes promise high sensitivity due to a large surface for their capture. Anodic alumina (AAO) filter membranes allow the flow through of samples, and could be used as a convenient and readily available fluidic platform for the targeted delivering of analytes to bioreceptors immobilized on the pore walls. The relatively small pore dimensions, compared to fluidic diffusion lengths, promise highly efficient capture of analytes from the whole sample volume, enabling relatively fast sensing response times and the use of small sample volumes (<100 μ L). In this

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