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FIB design for nano-fluidic applications[1] REMY FULCRAND, ALESSANDRO SIRIA, ANNE-LAURE BIANCE, LYDERIC BOCQUET, Intitut Lumière Matière, Université Lyon1 - CNRS, UMR5306, 69622 Villeurbanne cedex, France, LIQUIDES ET INTERFACES TEAM — In this paper we briefly review the techniques available to researchers in the nano-fluidic domain to fabricate nano-pores and nano-channels. In this context the focused ion beam (FIB) technique will be introduced as a useful and versatile tool for nano-fluidics. We illustrate it with two specific examples involving nano-pores as building blocks for nano-fluidics. Nano-pores, either biological, solid-state, or ultra thin pierced grapheme, are powerful tools which are central to many applications, from sensing of biological molecules to desalination and fabrication of ion selective membranes.

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