

## Towards the Integration of a Micro Pump in $\mu$ TAS

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**Abstract :** The objective of this study is to present a micro mechanical pump that was fabricated using SwIFT&trade; microfabrication surface micromachining process and to demonstrate the feasibility of integrating such micro pump into a micro analysis system. The micropump circulates the bio-sample and magnetic nanoparticles through different compartments to separate and purify the targeted bio-sample. This article reports the flow characteristics in the microchannels and in a crescent micro pump.

**Keywords :** crescent micropumps, microanalysis, nanoparticles, MEMS

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