

Designing and Fabricating Electromagnetically Actuated Microvalves for MEMS Applications

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This paper reviews our work on microfabricated miniature electromagnetic microvalves. Three different designs are presented: on/off, mechanically bistable, and rotational microvalves. This paper concentrates in the design, modeling/simulation, and the fabrication of different types of electromagnetic microvalves. The challenges in the fabrication of permanent magnets directly on the valve's membrane structure to produce bistable techniques are also presented.

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