

Fabrication

Fabrication comprises in the etching of tubs in an aqueous solution of KOH (A) followed by the plasma enhanced chemical vapor deposition of a 2 μm thick silicon nitride layer (B). In the next step UV lithography is used to solely define and transfer the cross sectional geometry of the groove and at the same time of the column into a photo resist layer. This enables a very flexible design of the cross section of the column. Independent from the lateral geometry a final strongly anisotropic dry etching process defines the height of the column via the etching time (C). This drastically facilitates the fabrication of columns with a length below 30 μm .

