

Imagine TF TECH BRIEF

Enabling the Future

The next generation of chromatography is here

Nano Precision

Precise fluidic structures fabricated with nanometer accuracy

Proven Low-Cost

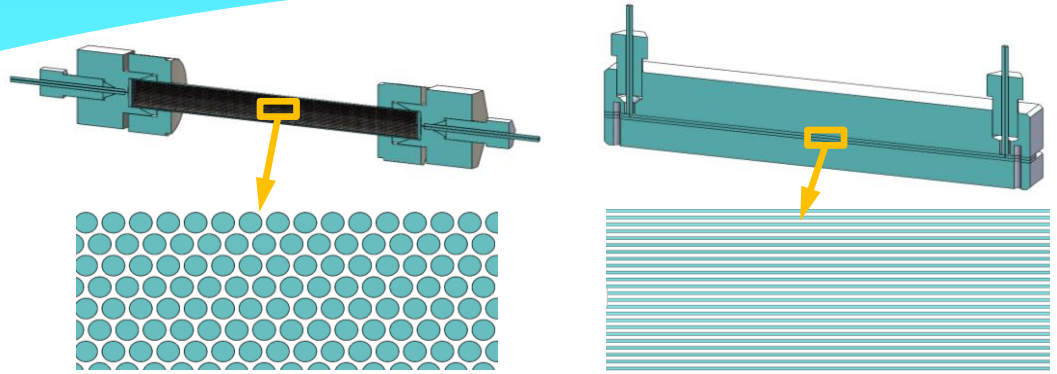
Production Techniques

Proven semiconductor manufacturing technology

nHPLC

Nanometer High Performance Liquid Chromatography

Chromatography with nanometer scale channels and stationary phase
Accurate and consistent within a few nanometers

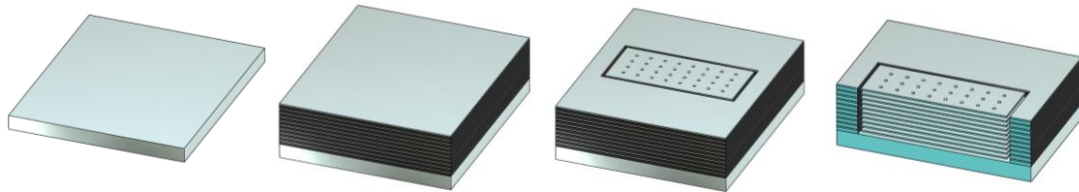
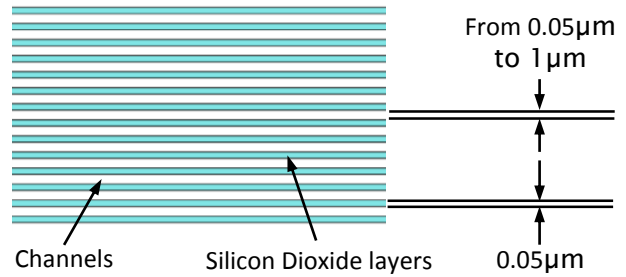


Current HPLC technology
Micron scale packed bed

Imagine TF Technology
Nanometer scale layered structures

Nanometer accuracy and scale

Advancements and processes from the semiconductor industry have been applied to chromatography



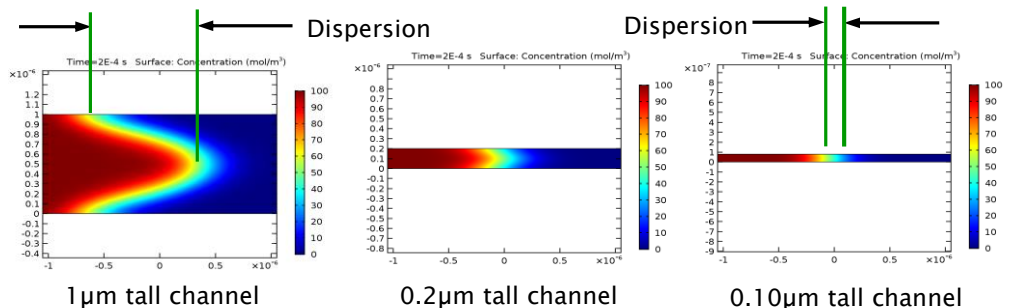
1. Substrate
Silicon dioxide of fused silica

2. Structures
Deposit alternating layers of SiO₂ and Si

3. Etch
Etch away the main fluidic channels and holes for etching the Si

4. Open channels
Etch away the Si to create channels and SiO₂ surfaces

Semiconductor processing steps



Dispersion is reduced with smaller channels



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