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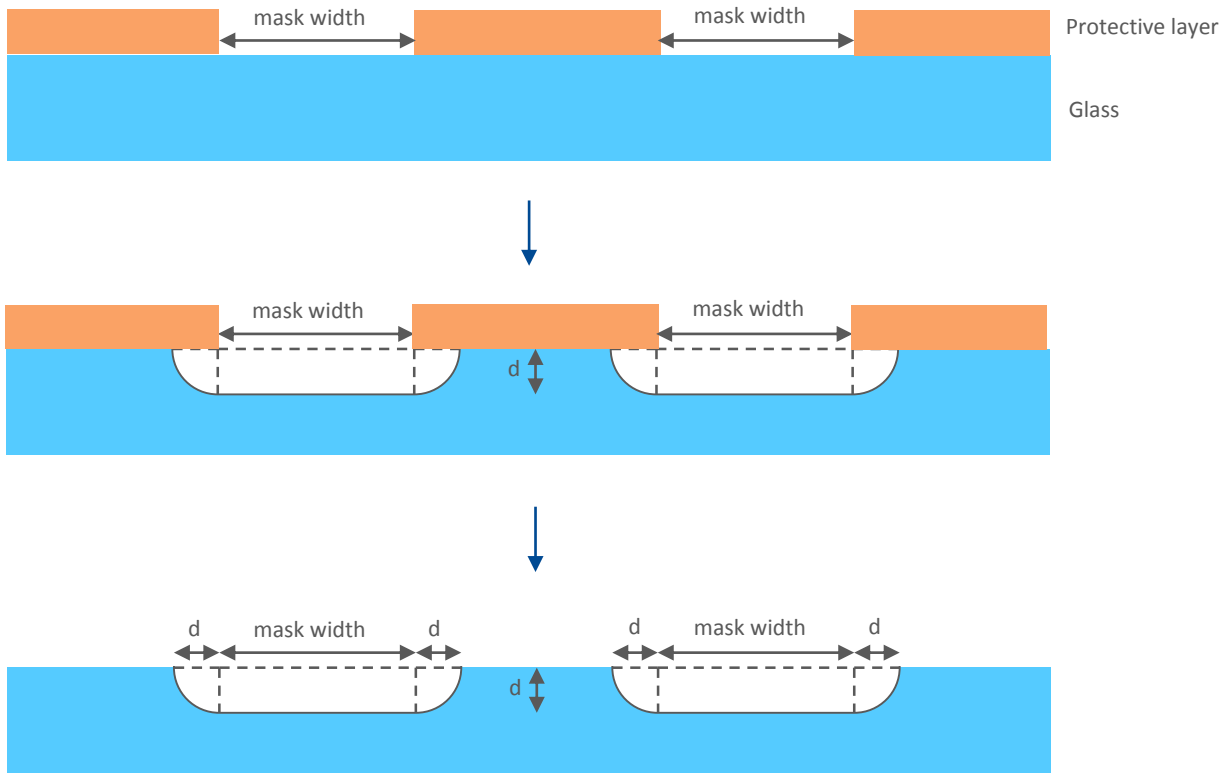
EOR information

Uniform network, random network and physical rock network

Isotropic etching



Due to our processing method, the channels always have the shape depited here. We expose a piece of glass to acids that desolve the glass equally fast in all directions. Because of this ‘growing in all directions’, the corners of the channels are round and the bottom width of the channel is smaller than the top width.

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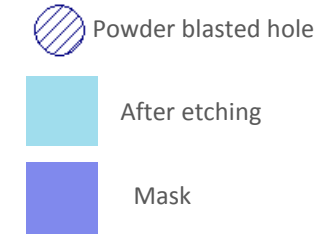
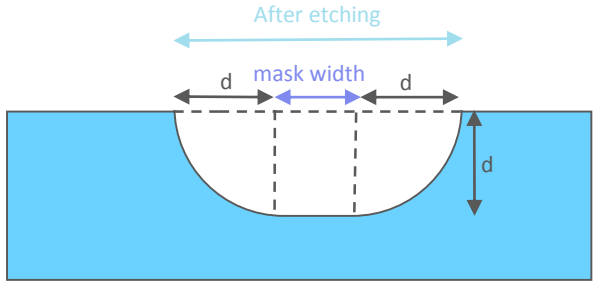
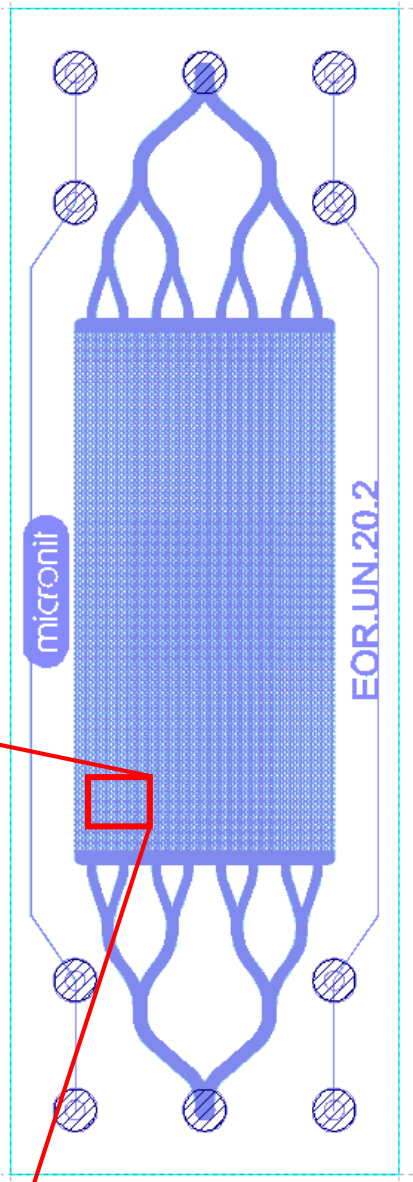
Uniform network

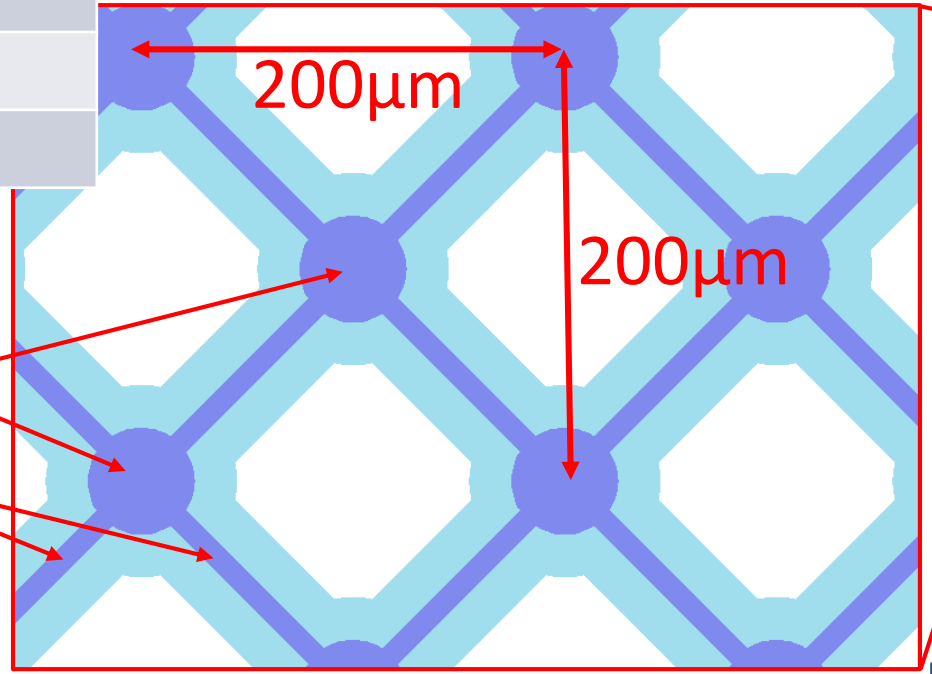
Dimension throat	
After etching	50µm
Mask width	10µm
depth	20µm
Dimension Pore	
After etching diameter	90µm
Mask width diameter	50µm
depth	20µm

Permeability: 2.5 Darcy









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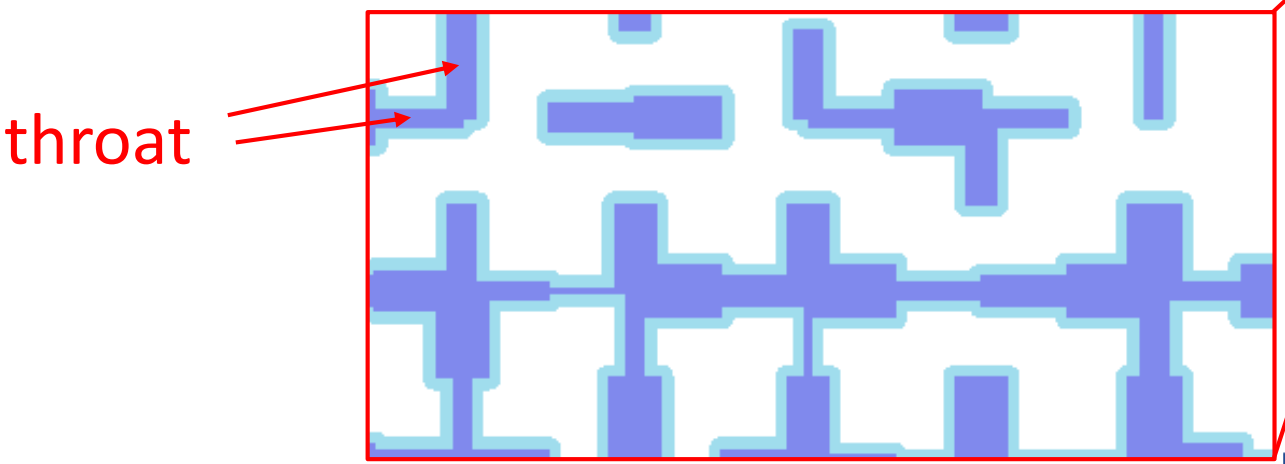
Random network

After etching	Mask width	Depth	Number of times on chip
50	10	20	1429
70	30	20	1438
90	50	20	1412
110	70	20	1412
130	90	20	1531

Permeability: 1.6 Darcy



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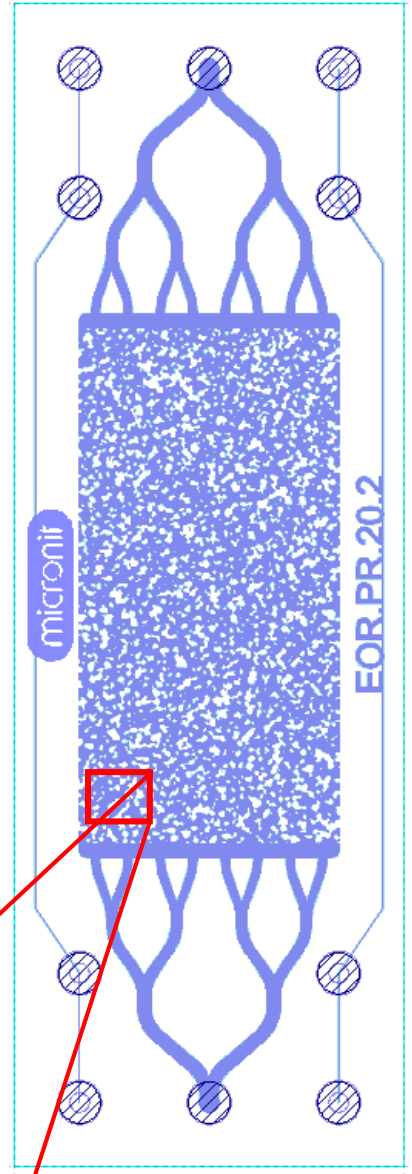
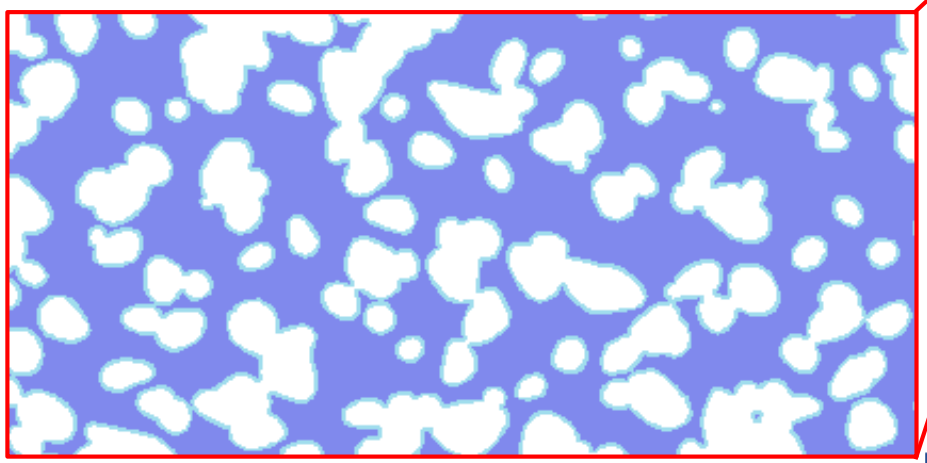
Physical rock network

This chip is designed by randomly placing rock shape structures on the chip to resemble as much as possible the actual shape that is obtained by cutting rock and scanning this. The random placement of rock structures gives throats in the channels that go between the rocks. This method of random placement does not give information on throat size distribution. For simulation purposes, the mask (2D) design is available on request. However, experience taught us that this structure is too complex to run simulations on a normal computer.

Permeability: 2.5 Darcy





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