Fig. 1. - Zeolite MFI deposited in the channels of a microreactor.

Fig. 2. - Mordenite layer deposited in a monolith channel.

Fig. 3. - Silicalite micromembranes. Bottom image: cross section.

Fig. 4. - Silicalite layers oriented over a Pd-doped SnO2 gas sensor.

Fig. 5. - Silicalite micromembranes were prepared on individual cylindrical straight holes of less than 100 μm of internal diameter. Zeolite micromembranes advantages:

-Reducing cracks and defects during thermal treatment, specially, in the calcination process. The mechanical stress increases in proportion to the membrane area.

-Large capacity to control important membrane properties such as intergrowth, thickness, permeation characteristics, orientation...

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