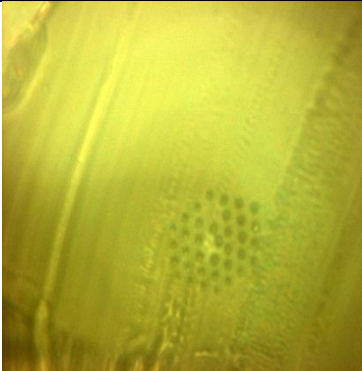
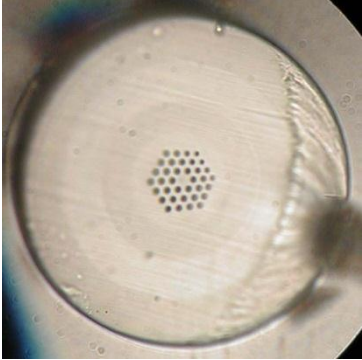
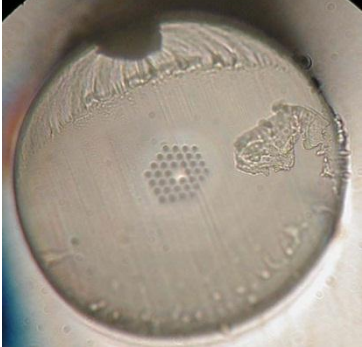
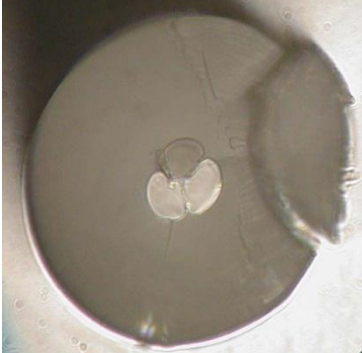
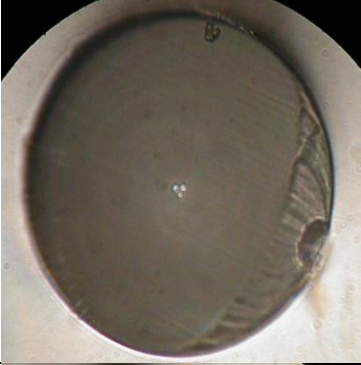
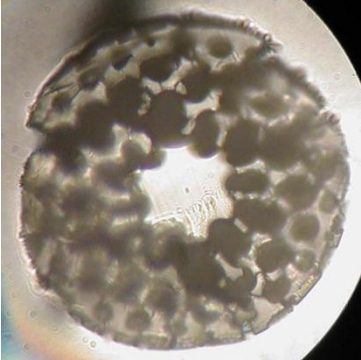
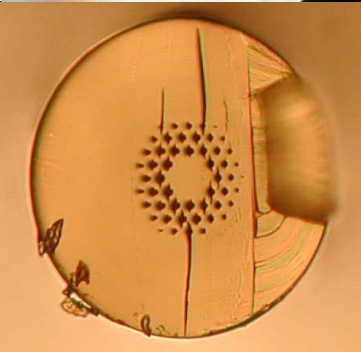
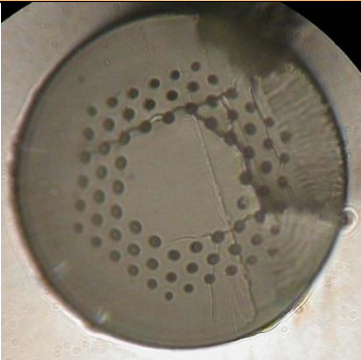


Marie Curie Grant Agreement 302919 – Polymer Gratings Sensors (POGS)

Figures relating to the final report.

Table 1 Fibres designed and fabricated by the Fellow at the Technical University of Denmark.

| Fibre type | Diameter size (μm) | Average ration d/Λ | Fabrication date | Picture |
|----------------------------|---------------------------------|---|------------------|--|
| Three ring doped BDK fiber | | $d=1.74$ $\Lambda=3.7$ $d/\Lambda=0.47$ | 19/12/2012 |  |
| Three ring fiber_2 | 135 | $d=2$ $\Lambda=4.39$ $d/\Lambda=0.455$ | 23/11/12 |  |
| Three ring fiber_3 | 132 | $d=2.17$ $\Lambda=4.1$ $d/\Lambda=0.53$ | 25/11/12 |  |
| Suspended-core fibre | 116 | $d=17$ $\Lambda=15,26$ $d/\Lambda=1,12$ | 02/12/12 |  |

| | | | | |
|----------------------------|-----|--|----------|--|
| Small suspended-core fibre | 133 | $d=2,73$ $\Lambda=3$ $d/\Lambda=0.91$ | 30/11/12 |  |
| Few modes1 | 140 | $d=15,36$ $\Lambda=17,55$ $d/\Lambda=0.88$ | 05/12/12 |  |
| Few modes2 | 300 | $d=7$ $\Lambda=15$ $d/\Lambda=0.47$ | 11/12/12 |  |
| Few modes3 | 135 | $d=4,74$ $\Lambda=10,6$ $d/\Lambda=0.45$ | 05/12/12 |  |

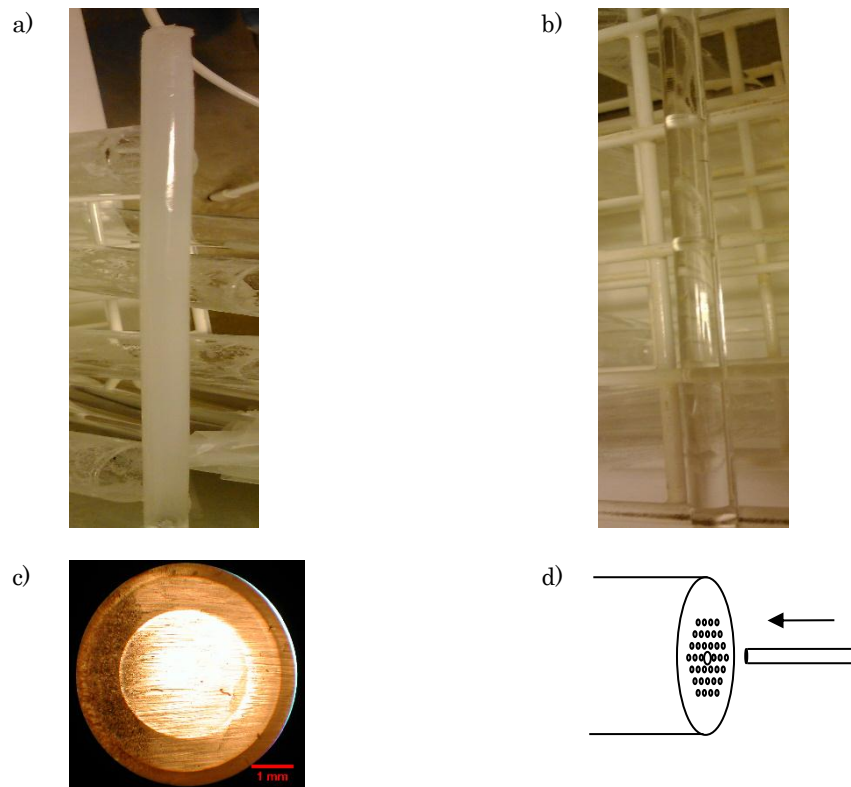


Figure 1. Doped rod 10 seconds (a) and 10 minutes (b) after extraction from the solution of BDK. (c) Transverse section of a microstructured preform with a larger central hole for the doped rod.

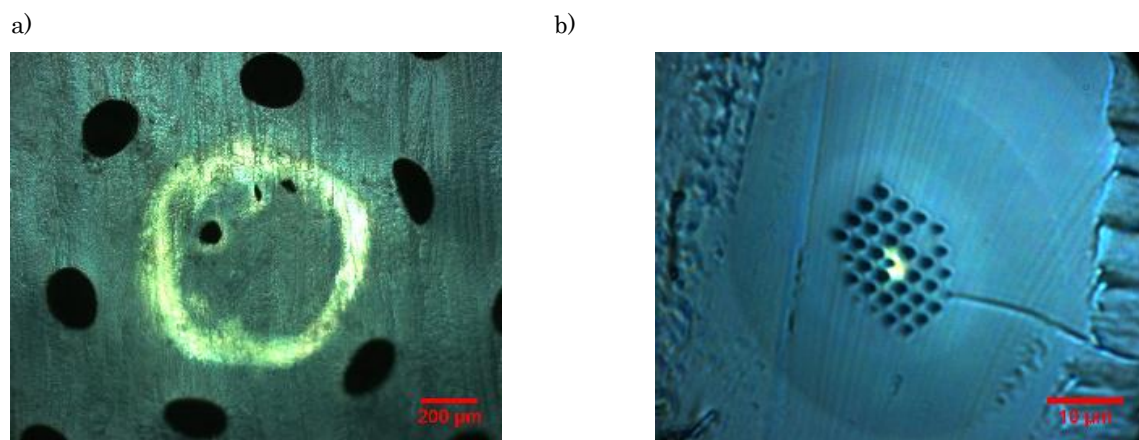
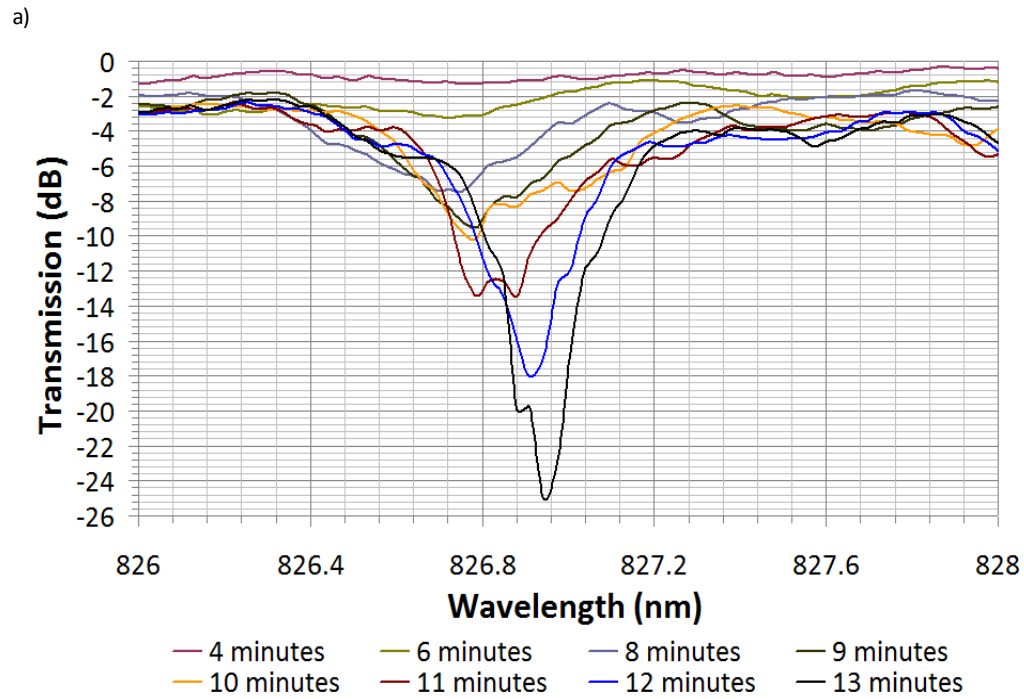


Figure 2. (a) Doped cane. (b) Doped fibre



b)

Figure 3. Growth spectrum FBG during first 13 minutes of inscription.

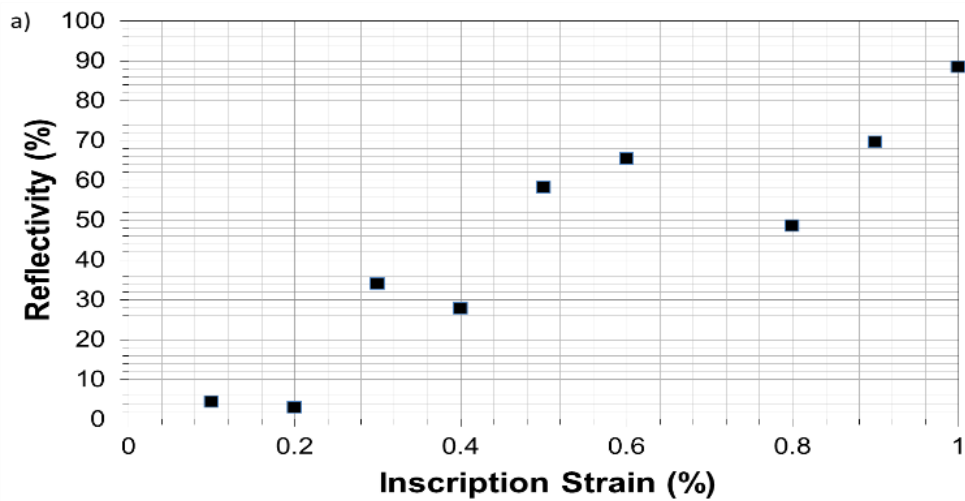


Figure 4. Bragg reflection against inscription strain for gratings with a Bragg wavelength of around 827nm.