

FLOIM

Flexible Optical Injection Moulding of optoelectronic devices

WP4,5

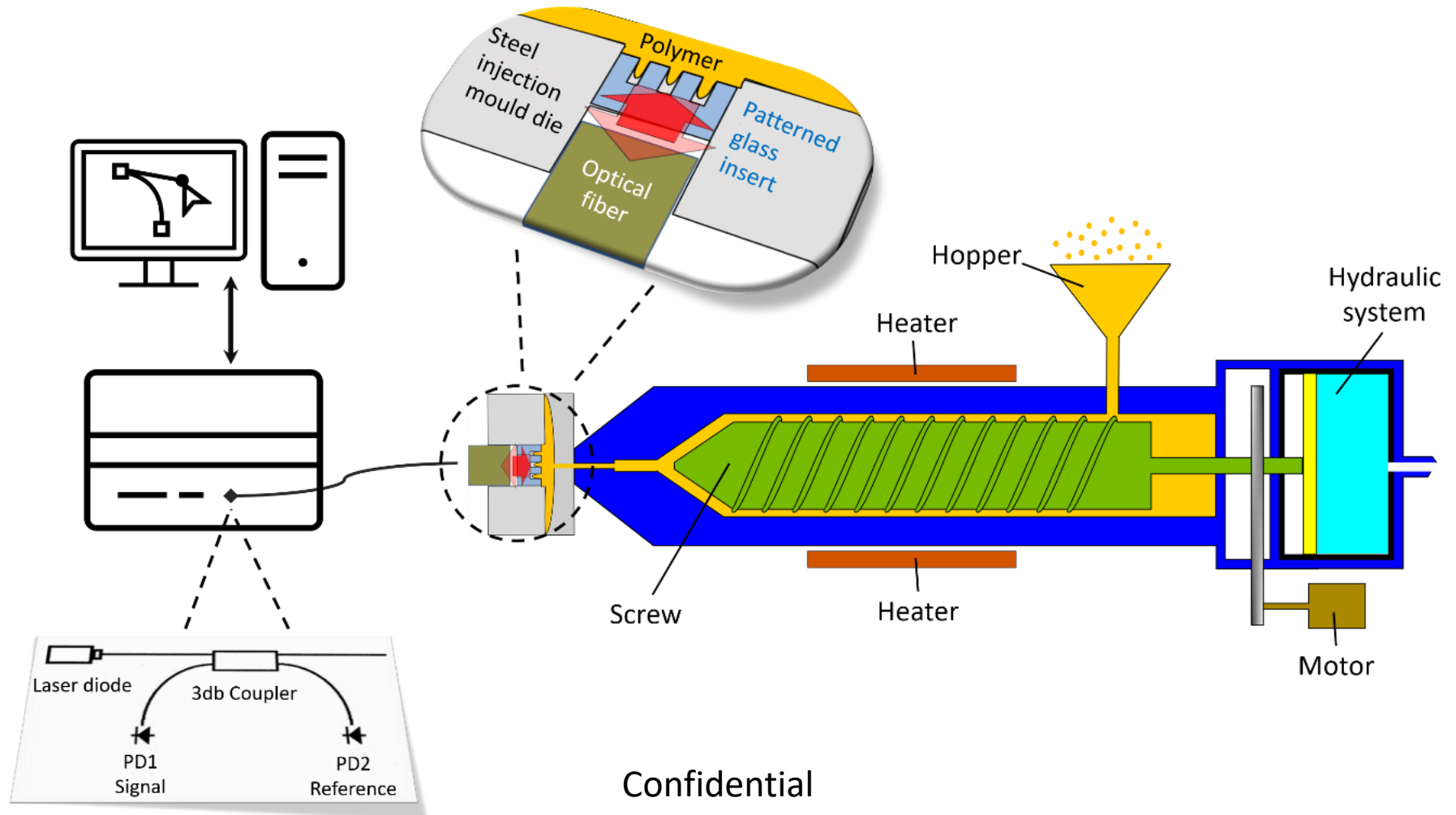
28 Apr 2022 , Munich

Adama Innovations

Sensor, Inspection and Machine Intelligence

Mould-filling sensor (Fibre-Optic Interferometer)

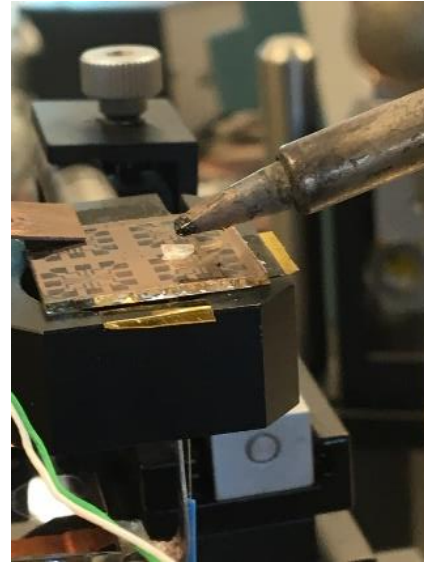
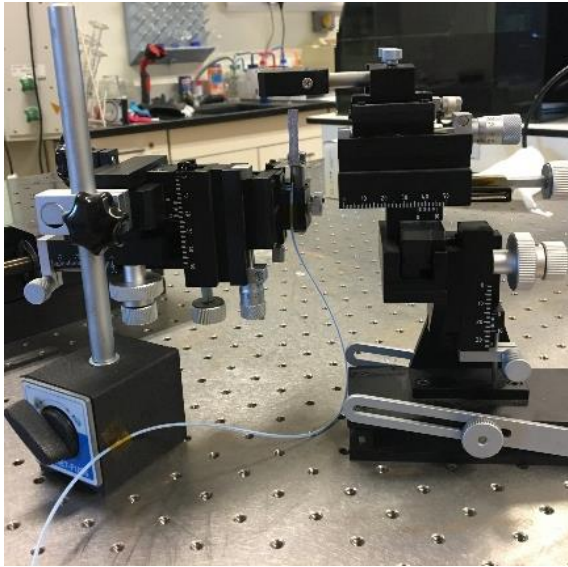
Mould-filling sensor (Fibre-Optic Interferometer)



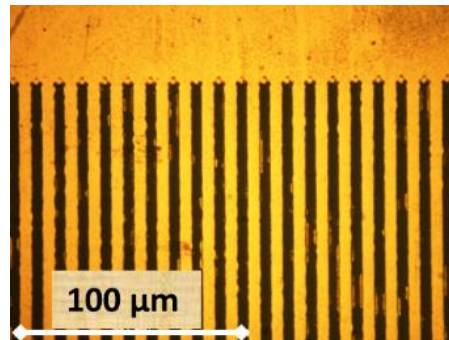
Confidential

Mould-filling sensor (Fibre-Optic Interferometer)

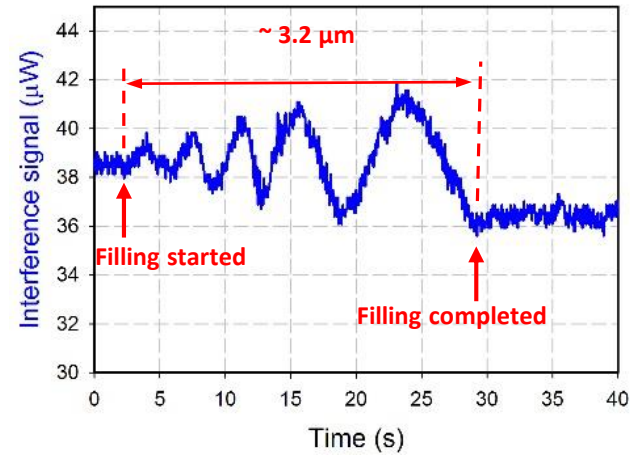
Melt front (filling) simulated test results



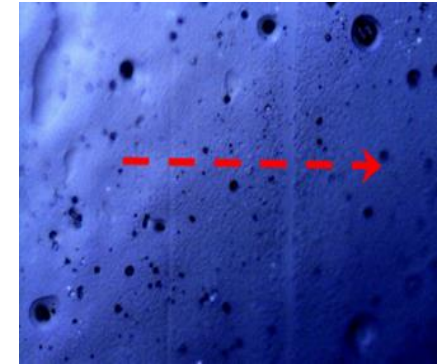
Patterned transparent insert



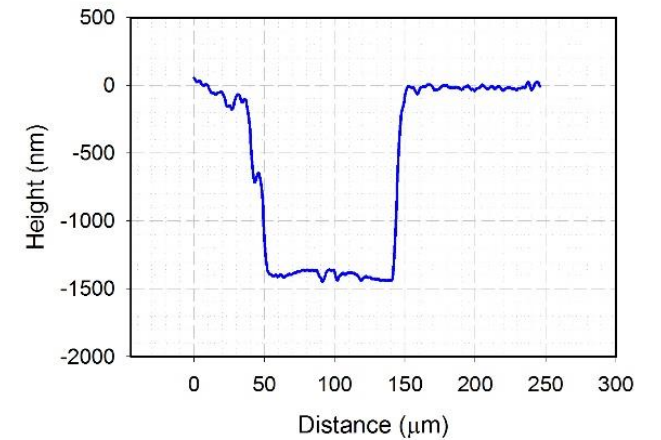
Measured interference signal



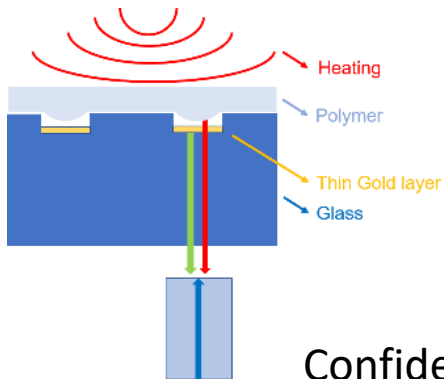
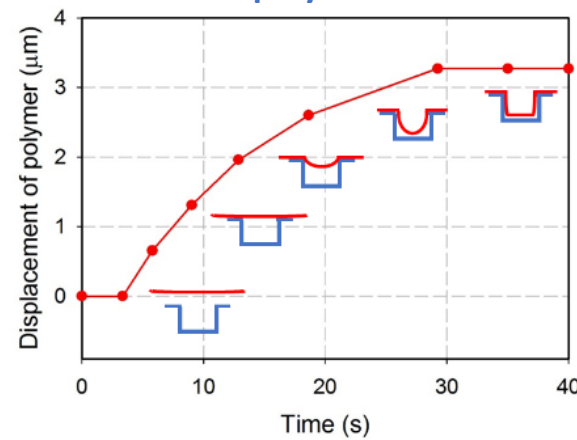
Optical image of replicated structure on polymer



Profilometry height measurement over the replicated structures



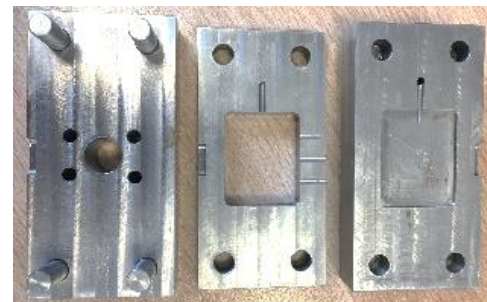
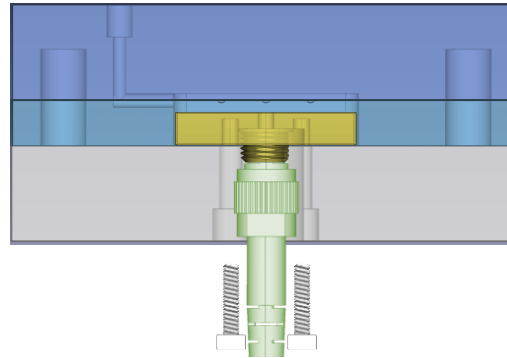
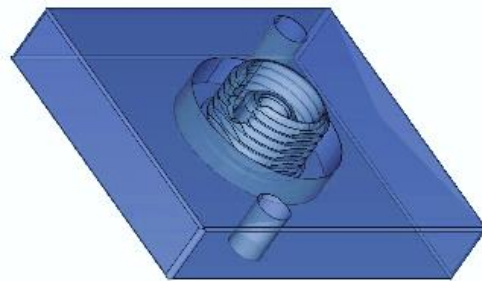
Simulated displacement map of polymer



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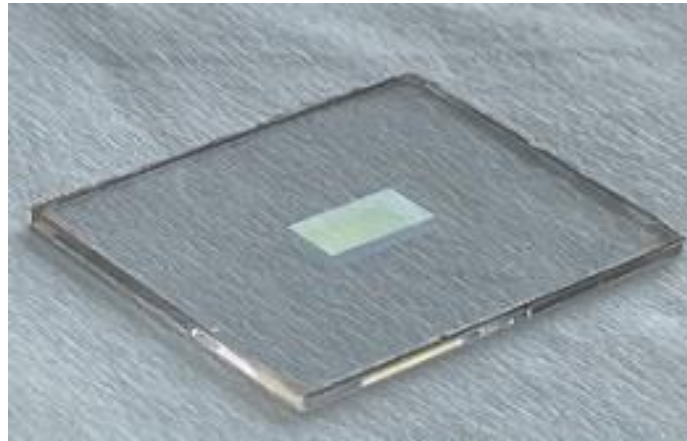
Mould-filling sensor (Fibre-Optic Interferometer)

Already prepared parts after achieving the promising lab scale test results that presented in previous meeting.

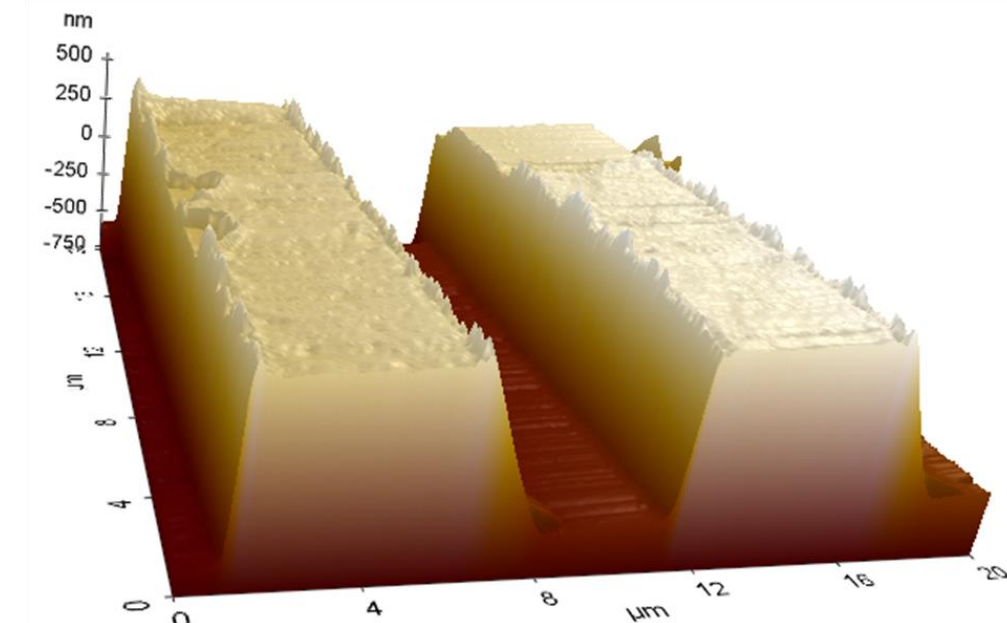
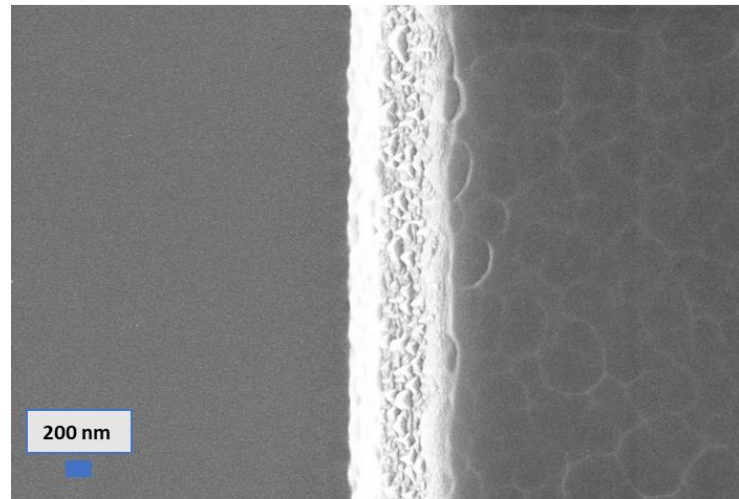
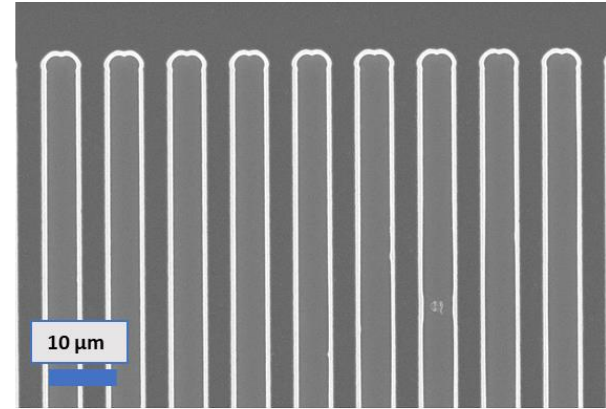
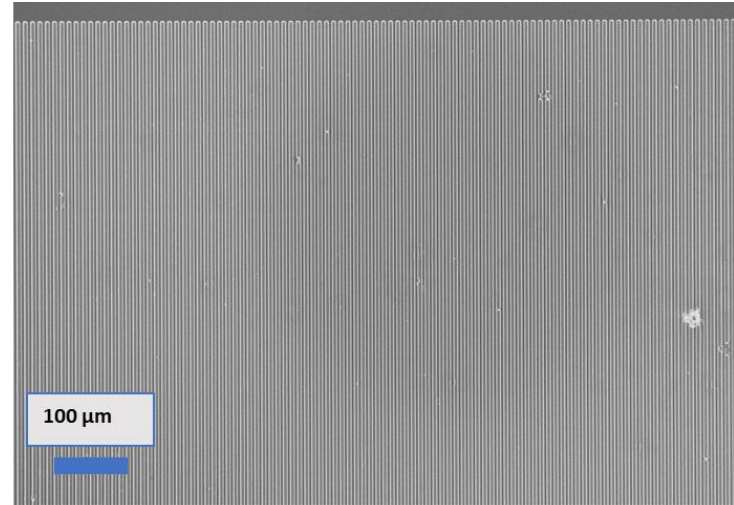


Transparent mould

SEM and AFM images of patterned gratings on the fused quartz

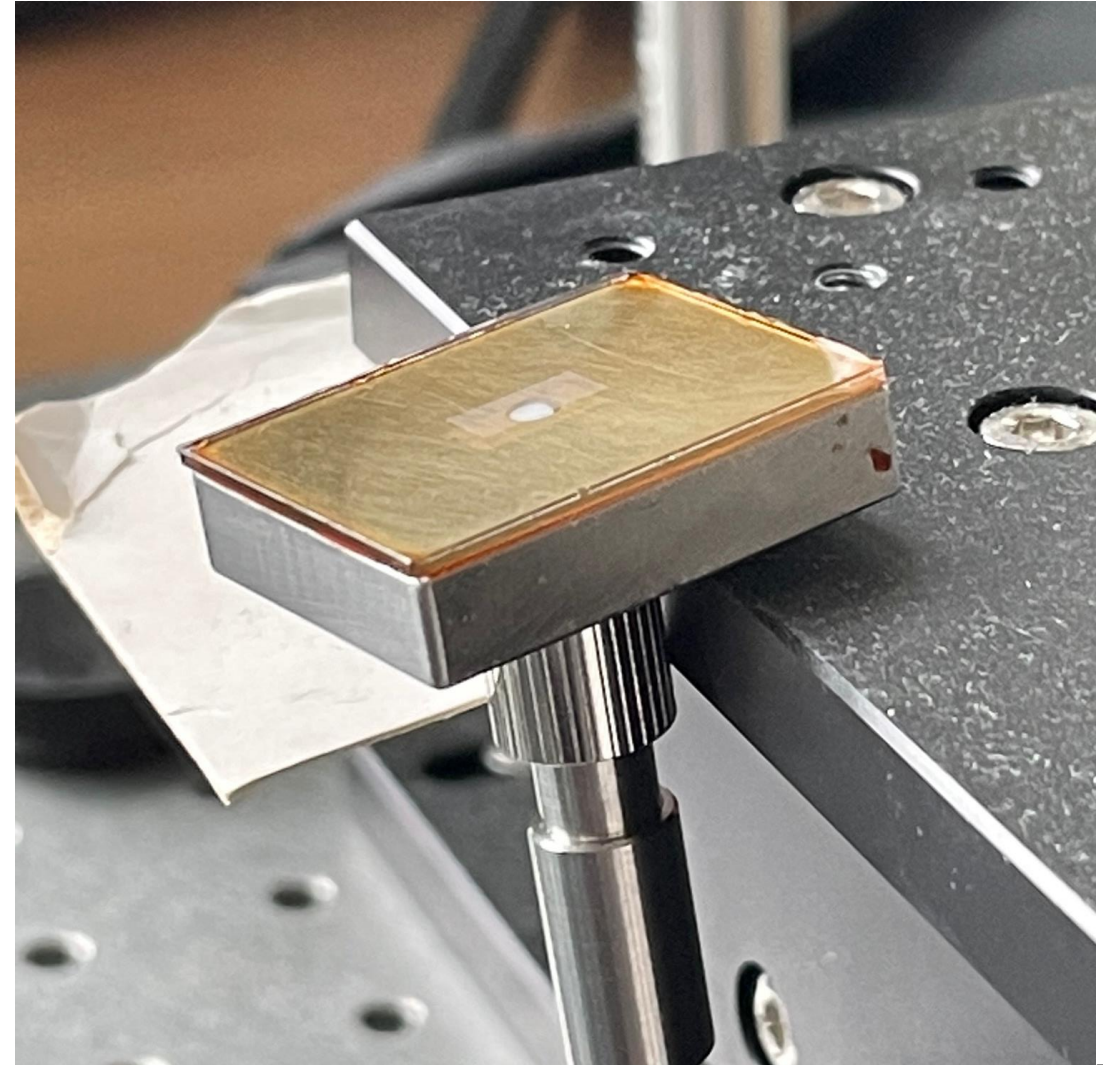
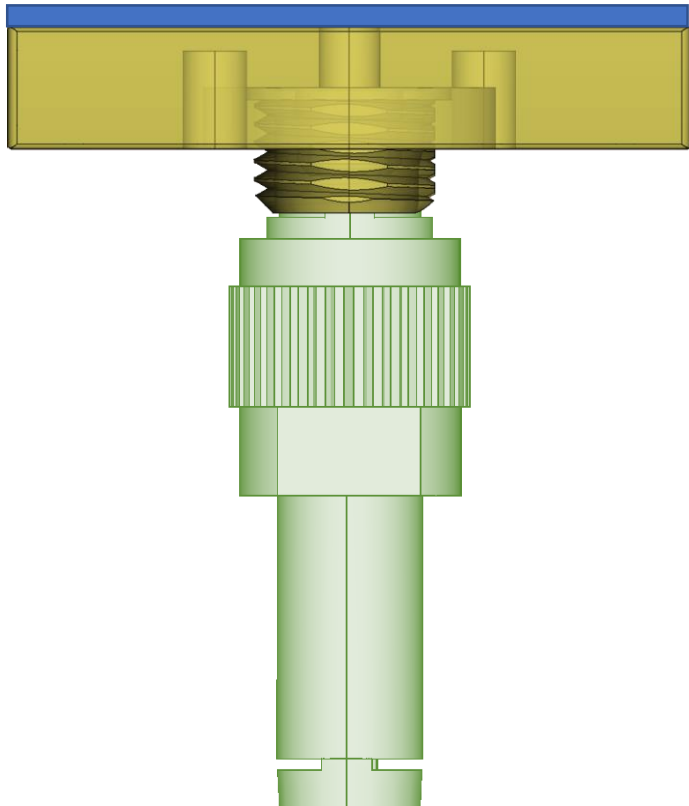


Mould

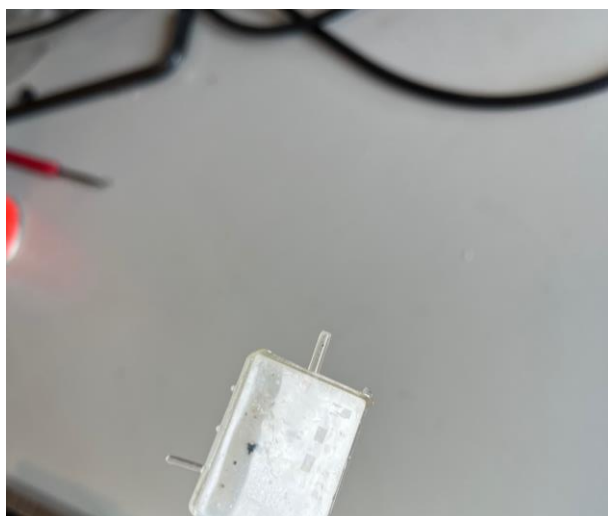
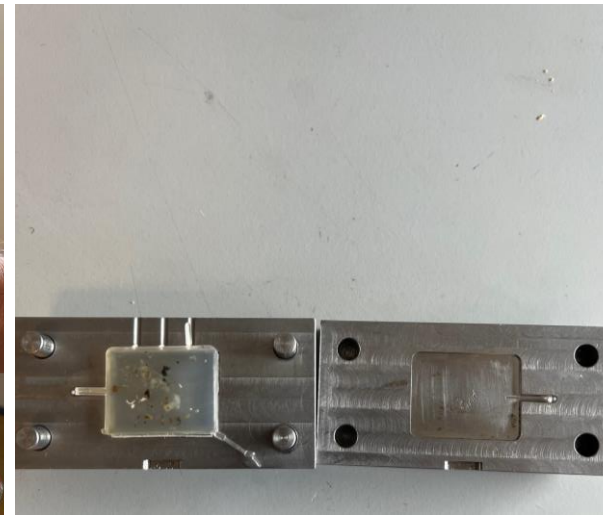
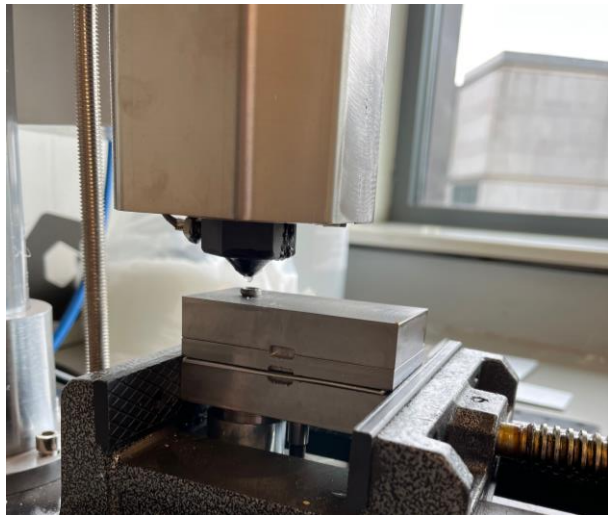


Mould-filling sensor (Fibre-Optic Interferometer)

Transparent mold attached to the stainless-steel insert equipped with a fiber connection

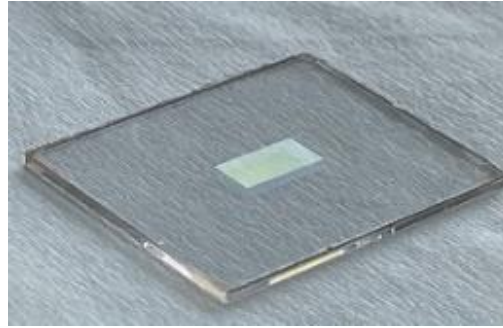


Test on injection moulding machine

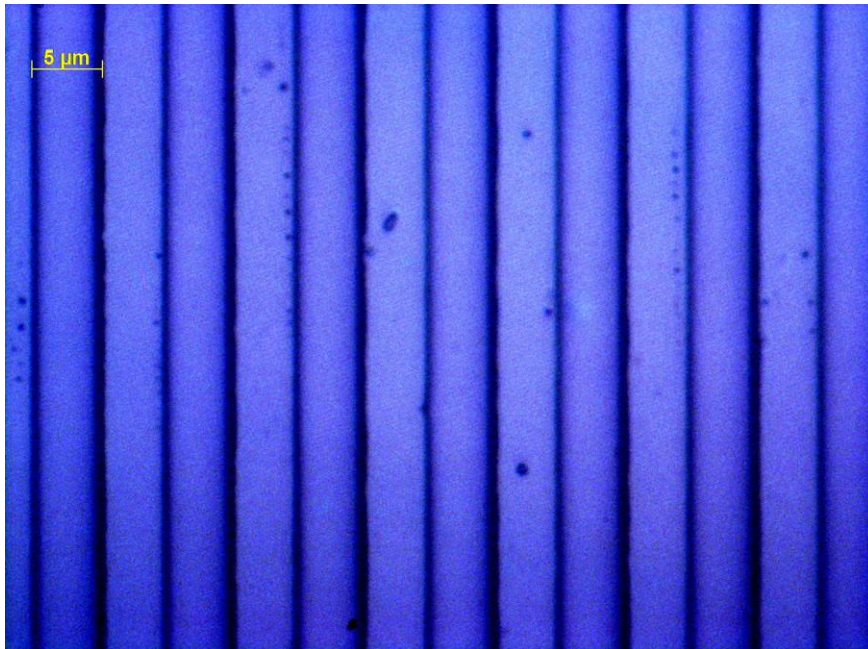
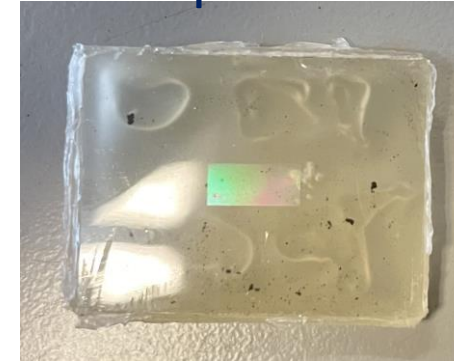


Test on injection moulding machine

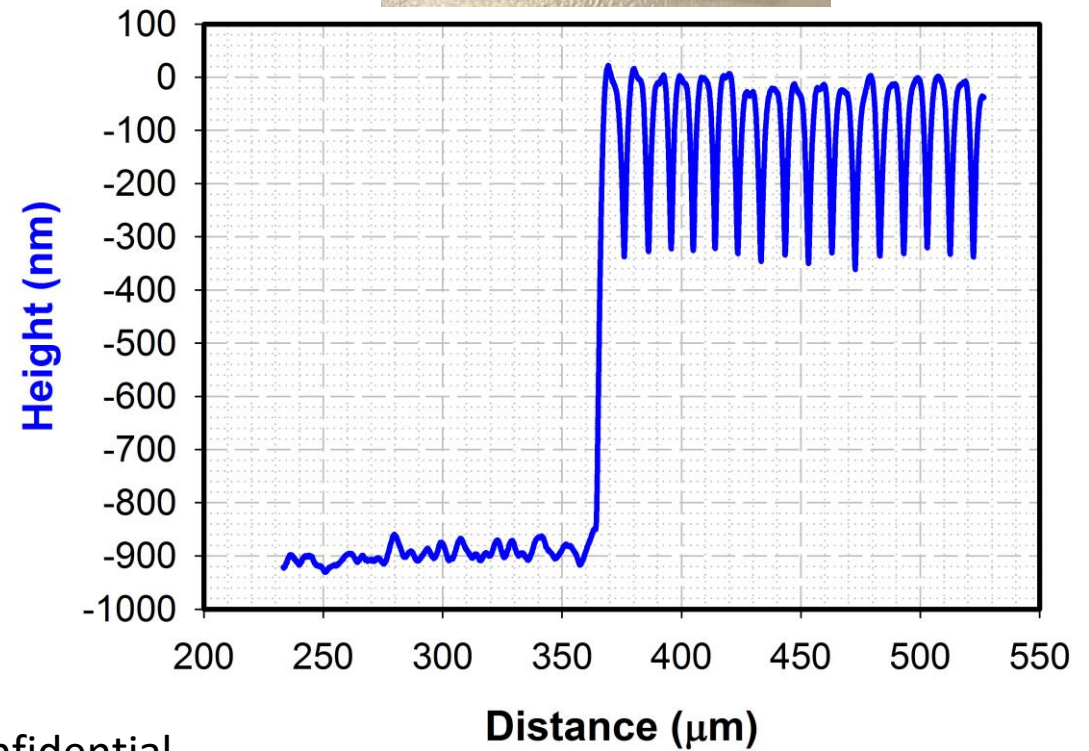
Mould

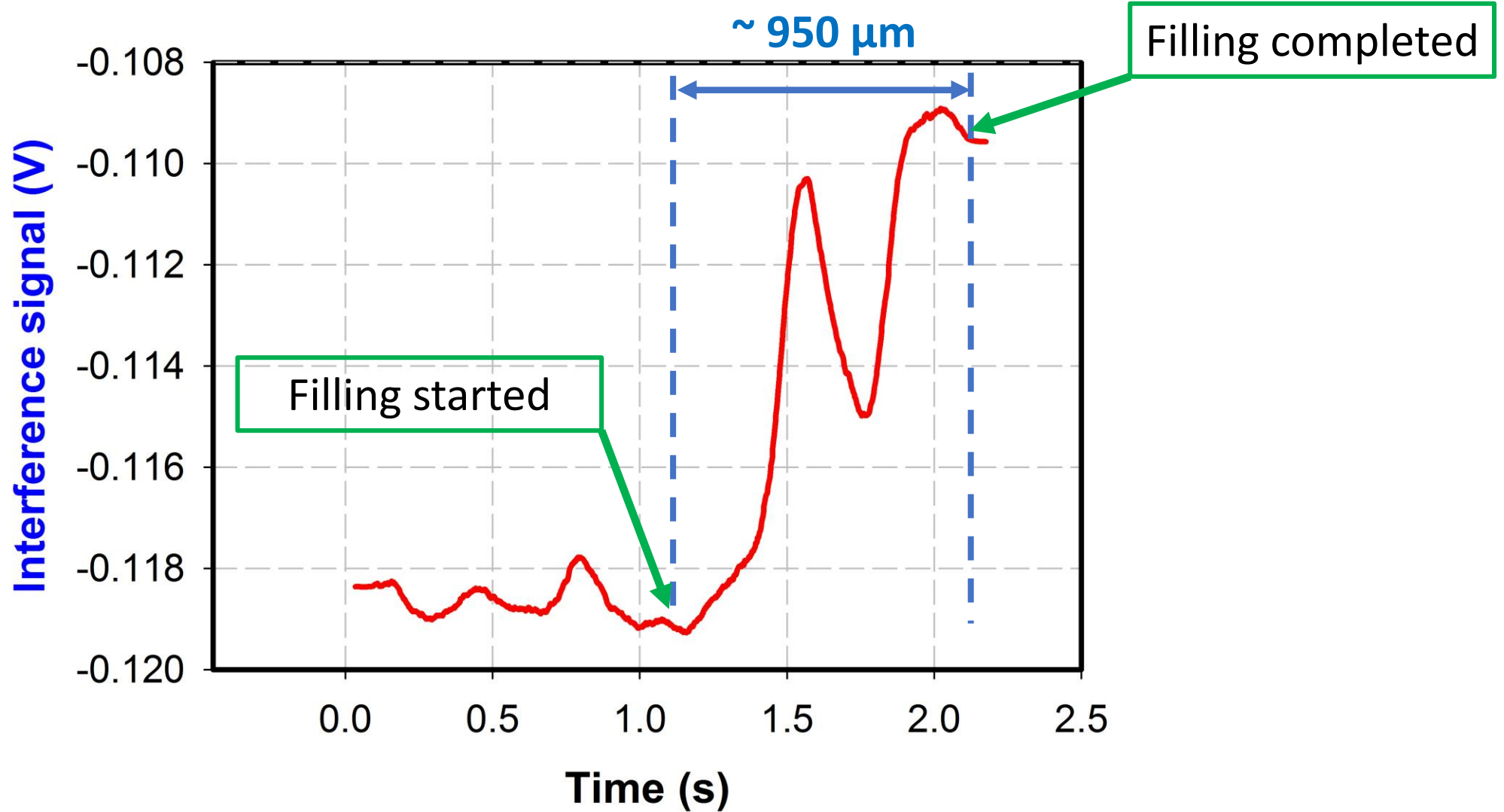


Replicate



Optical image of replicate





Thanks for your attention

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Consortium:



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