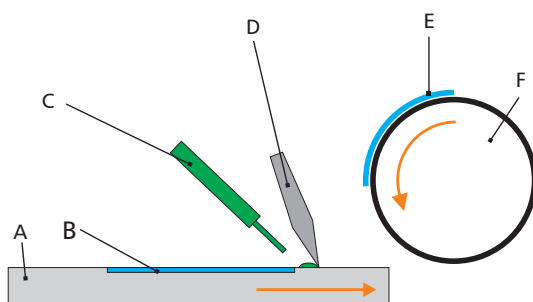


# Micro Structured Glass for the Gravure Printing Process

## Principle of Gravure Printing



**A:** Printing plate (metal), **B:** Glass cliché with recessed cells, **C:** Spreading of ink on the printing plate, **D:** Doctor blade to fill in the ink in the cells of the glass cliché, **E:** Mechanically fixed flexible substrates (plastic sheets or thin glass sheets), **F:** Printing roll

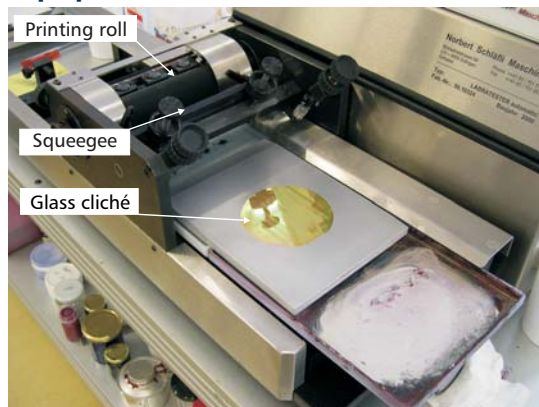
## Process Application

- Printing of electrically functionalised inks for electronic components

## Process Advantage

- Very high speed in production
- Printing of polymers and particle loaded inks
- Print on thin sheet glass and plastic substrates

## Equipment

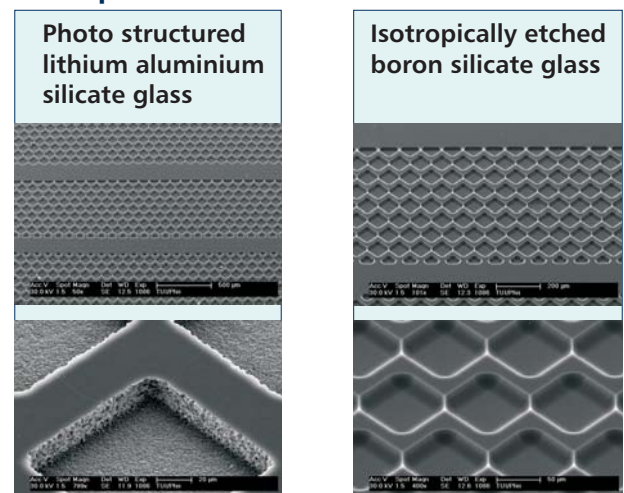


Test printer: LABRATESTER (NSM-Zofingen (CH))

## Advantage of Glass Clichés

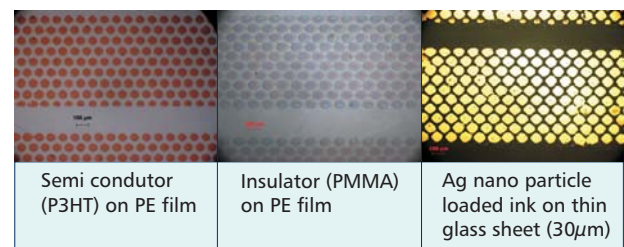
- High mechanical, thermal and chemical stability
- Possibility for process visualisation due to the high transparency
- Different micro structuring methods are available for the fabrication of defined cell geometries

## Examples of Glass Clichés



## Examples of Gravure Printed Structures

High viscosity inks used to study the dot structure produced by glass clichés.



Thickness of printed layers < 500nm, dependent on cell geometry

## About the Project



Project partners:  
 Imperial College London (UK)  
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 Norbert Schläfli Maschinen (CH)  
 MERCK Chemicals Ltd.(UK)  
 TU Ilmenau (D)  
 ASULAB SA (CH)  
 IMEC (B)

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