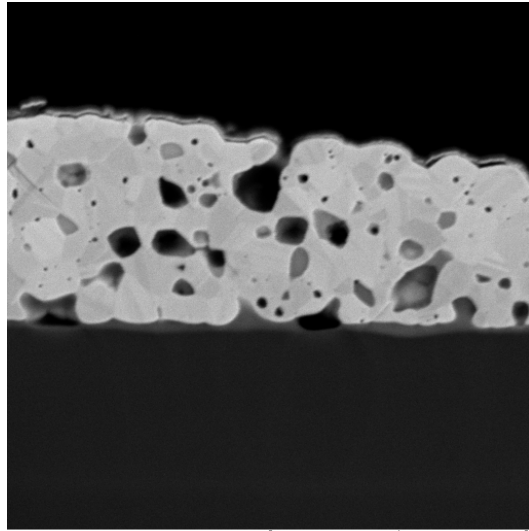
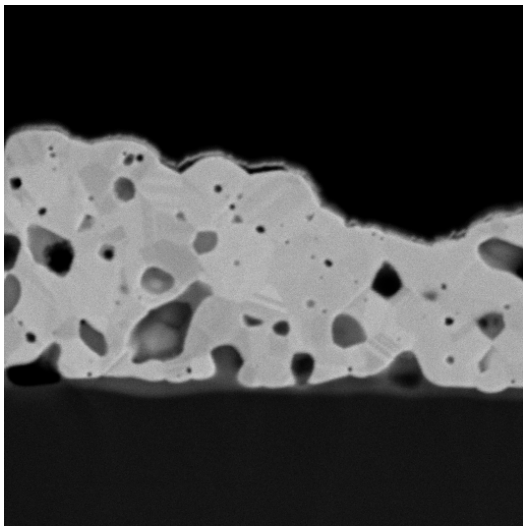


SEM MAG: 1.28 kx
HV: 10.0 kV
VAC: HiVac
DET: BSE
DATE: 01/22/10
Device: VEGA 5130
50 um
Vega ©Tescan
CZ



SEM MAG: 6.98 kx
HV: 10.0 kV
VAC: HiVac
DET: BSE
DATE: 01/22/10
Device: VEGA 5130
10 um
Vega ©Tescan
CZ



SEM MAG: 9.51 kx
HV: 10.0 kV
VAC: HiVac
DET: BSE
DATE: 01/22/10
Device: VEGA 5130
5 um
Vega ©Tescan
CZ



Cross section of a glass / silver heater interface of a heated window

Leica EM TIC 020

Silver heater in a heated window

Market: Car industry

Companies (e.g.): Daimler, Opel, Renault, BMW, VW, ...

Living up to Life

Leica EM TIC 020 Application

Silver heater in a heated window

Market: Car industry

Companies (e.g.): Daimler, Ford, Opel, Renault, BMW ...

Wolfgang Grünewald, Leica Mikrosysteme GmbH, Chemnitz

(Wolfgang.Gruenewald@leica-microsystems.com)

Goal:

- Cross section of a glass / silver wire interface

Process description (benchmark values for this particular sample):

Mechanical pre-preparation:

- Grinding with the EM TXP to get a flat cross-sectional surface

Parameter	
Acceleration voltage	7 kV
Gun current	2.6mA
Milling time	3
Complete process time	3 h 10 min

Results:

- Perfect cross section of the glass / silver wire interface
- The structure of silver and the interface area with an intermediate layer are clearly visible.
- The silver wire shows a lot of pores and inclusions.