

# 3D status @ FBK

*Alvise Bagolini, Maurizio Boscardin, Gabriele Giacomini,  
**Elisa Vianello**, Nicola Zorzi*

23/02/2011

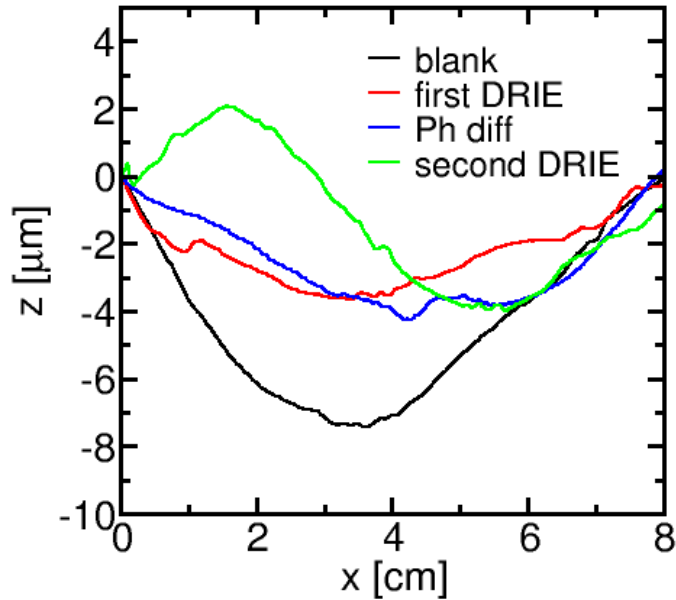
# 3D completed processes

Batch name	FE	No. of wafers	Wafer thickness [μm]	Comments	Status
Atlas 07	I4	4	230	bowig ~100μm	sent to IZM for bump-bonding
Atlas 07	I4	4	200	bowig ~100μm	electrical tests in progress
Atlas 08	I3	1	200	bowig <50μm	bump-bonding at Selex. Test in progress.
Atlas 08	I3	5	200	bowig <50μm	electrical tests in progress

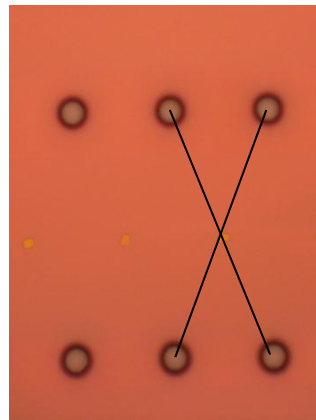
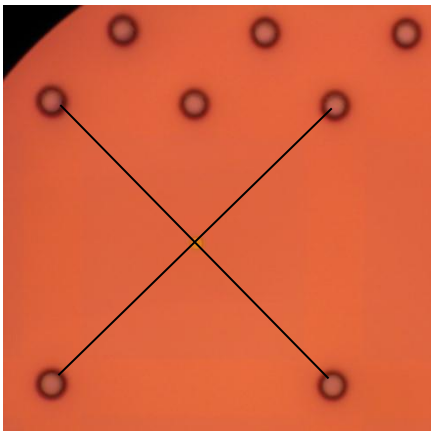
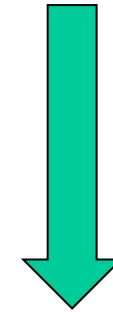
# 3D fabrication status

Batch name	FE	No. of wafers	Wafer thickness [μm]	Comments	Status
Atlas 09	14	10 8 5	200 23 250	bowing < 10 μm	second DREI done
Atlas 10	14	25	230		edge protection
Atlas 10	14	25	230		edge protection
AtlasIBL	14	20	230+500	3D <u>with</u> support wafer	sent to sintef

# ATLAS09



- new process to further reduction of the bowing
- measure of the bowing step by step during the process



good columns alignment  
also at the wafer edge

# ATLAS07:

## IV measurements on 3D diodes

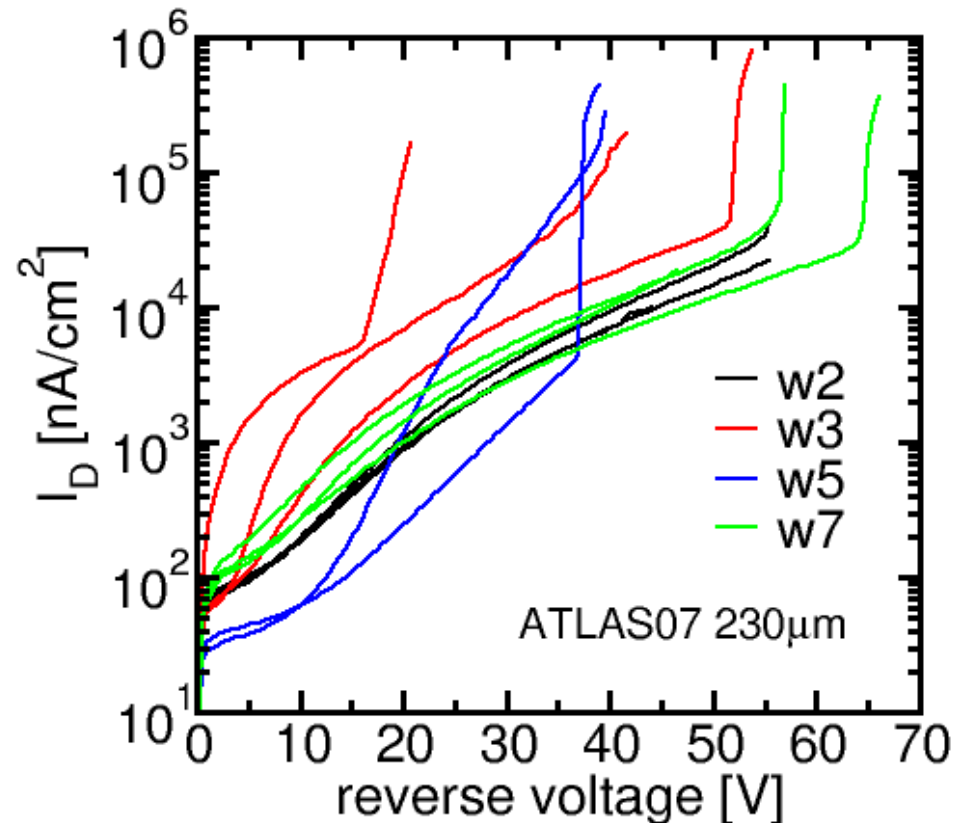
80\_BIG\_MOD

Area = 9.4 mm<sup>2</sup>

40X40 ohmic columns (p+)

39X39 Junction Columns (n+)

**~30pA/column @ 10V**  
**VBD~50-60V**



# ATLAS08:

## IV measurements on 3D diodes

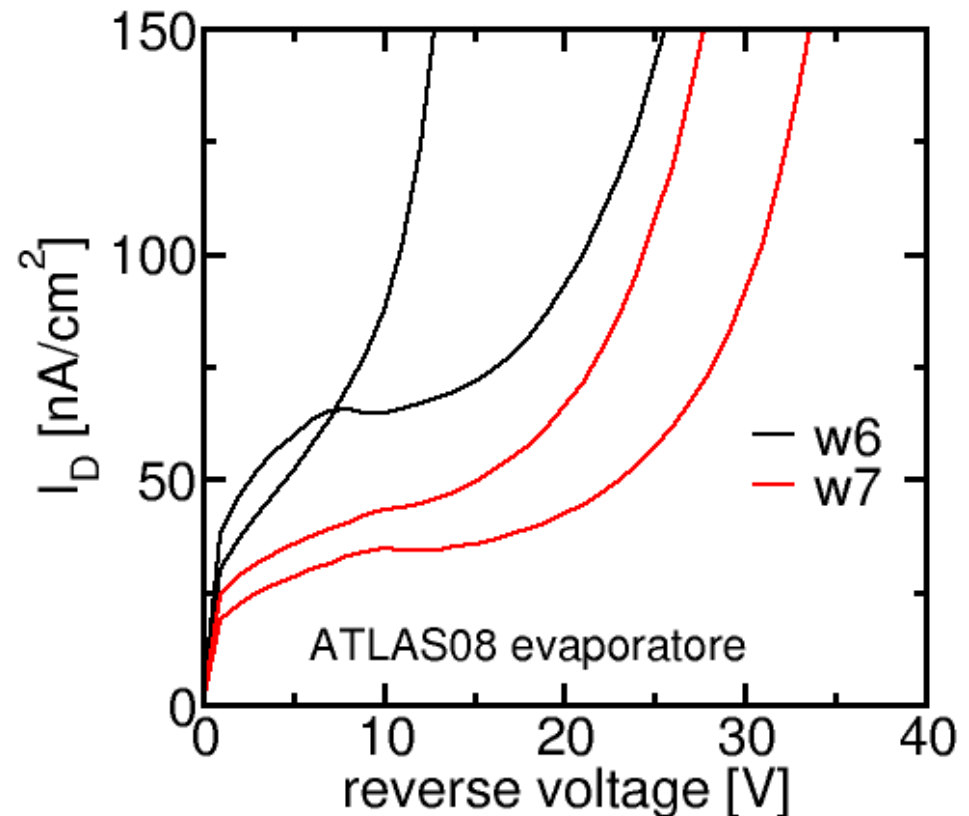
80\_BIG\_MOD

Area = 9.4 mm<sup>2</sup>

40X40 ohmic columns (p+)

39X39 Junction Columns (n+)

**~3pA/column @ 10V**  
**VBD~30-40V**



																										28-feb-11	
																										07-mar-11	
																										14-mar-11	
																										21-mar-11	
																										28-mar-11	
																										04-apr-11	
																										11-apr-11	
																										18-apr-11	
																										25-apr-11	
																										02-mag-11	
																										09-mag-11	
																										16-mag-11	
																										23-mag-11	
																										30-mag-11	
																										06-giu-11	
																										13-giu-11	
																										20-giu-11	
																										27-giu-11	
																										04-lug-11	
																										11-lug-11	
ATLAS 11	isolamento	p&n plus	p&n plus	colonne n+	colonne n+	colonne p+	colonne p+	colonne n+	metal	passivazione																	
ATLAS 10	isolamento	p&n plus	p&n plus	colonne n+	colonne n+	colonne p+	colonne p+	colonne n+	metal	passivazione																	
ATLAS 09 230																											
ATLAS 09 200&250																											