Last Meeting

Discussion/action points

Nr.	Description	Responsible
1.	**DBR Laser test cell on SP22** Valentina presents the cell for SP22. It contains wide SOAs in DBR laser structures for high power. It also includes spectral gain measurement structures and extended ring cavity DBR lasers.	
2.	**SP 20 MZM chips** SP 20 MZM chips on semi-insulting wafer look good in microscope. Characterization of electrical performance will follow.	
3	**Pixapp pad layout** The layout has not been changed with respect to pad positions. Merely the shape of pads have been changed to be elongated in N-S direction.	
4	**WP2 update** Roel presents loss and threshold data from recent SP runs. Indication that loss and threshold are brought back to controlled range.	

Building Block Development

MZ Modulator

RF Lines

WP 3.1	*BB Design*		
WP3.1.M0	Technology and Design Concept	Weiming, Ronald	Dec-16
WP3.1.R0	Analysis and Design	Weiming, Ronald	Jun-17
WP3.1.M1	Mask Design Tape-out I	Weiming, Ronald	Jun-17
WP3.1.R1	**BB Results I**	**Weiming, Ronald**	**Mar-18**
WP3.1.M2	Mask Design Tape-out II	Weiming, Ronald	Sep-18
WP3.1.R2	BB Results II	Weiming, Ronald	Jun-19

WP 3.2	*PDK Content*		
WP3.2.M0	State of the PDK	Rui	Dec-16
WP3.2.M1	Definition of basic BB figure of merits	Rui	Mar-17
WP3.2.M2	Definition of composite BB FoM	Weiming	Mar-17
WP3.2.R0	Definition of measurement procedures	Weiming	Jun-17
WP3.2.R1	**PDK upgrade with new advanced BB**	**Rui**	**Mar-18**
WP3.2.R2	**Compact Models**	**Rui**	**Jun-18**

Building Block Testing

WP3.3.R0	Design of Standard MPW BB test cell	Weiming	Mar-17
WP3.3.M0	**Report on standard MPW BB cell results**	**Rui**	**Every MPW**
WP3.3.R1	Design of composite BB test cell	Weiming	Sep-17
WP3.3.M1	Report on composite test cell results	Weiming	Mar-18

Automated testing

Design Flow

WP3.4.DF.R0	**Design Flow document**	Marcel	Mar-17	Jan-18	Nov-18
WP3.4.DF.R1	Improvement points	Marcel	Apr-17	Feb-18	Dec-18
WP3.4.DF.M0	Implementation of selected improvement points	Marcel	Jan-18	Nov-18	Aug-19
Database, templates	Final Design flow Document	Marcel	Aug-19		
	Exectution Flow document	Ronald	May-17	Mar-18	Jan-19
	Implementation of an Execution DB	Ronald	Mar-18	Jan-19	Aug-19
	Final Execution Flow document	Ronald	Aug-19		
PDA FLow	**Development of PDAflow template**	Marcel	Mar-17	May-18	Jul-19
	Implementation of first building block	Marcel	Apr-17		
	Full documentation of template	Marcel	Mar-17	May-18	Jul-19
WP3.4.PDA.M2	Update of Smart and TU/e PDK	Marcel	Jun-18	Dec-18	Aug-19
WP3.4.DRC.R0	DRC requirement report	Marcel	May-17		
WP3.4.DRC.R1	Documentation of DRC capability	Marcel	Aug-17	Aug-18	Jun-19
WP3.4.DRC.M0	DRC Implementation in PDKs	Marcel	Nov-17	Sep-18	Jul-19
WP3.4.DRC.R2	Implementation of new DRC functionality	Marcel	Aug-18	Jun-19	

Smart Update

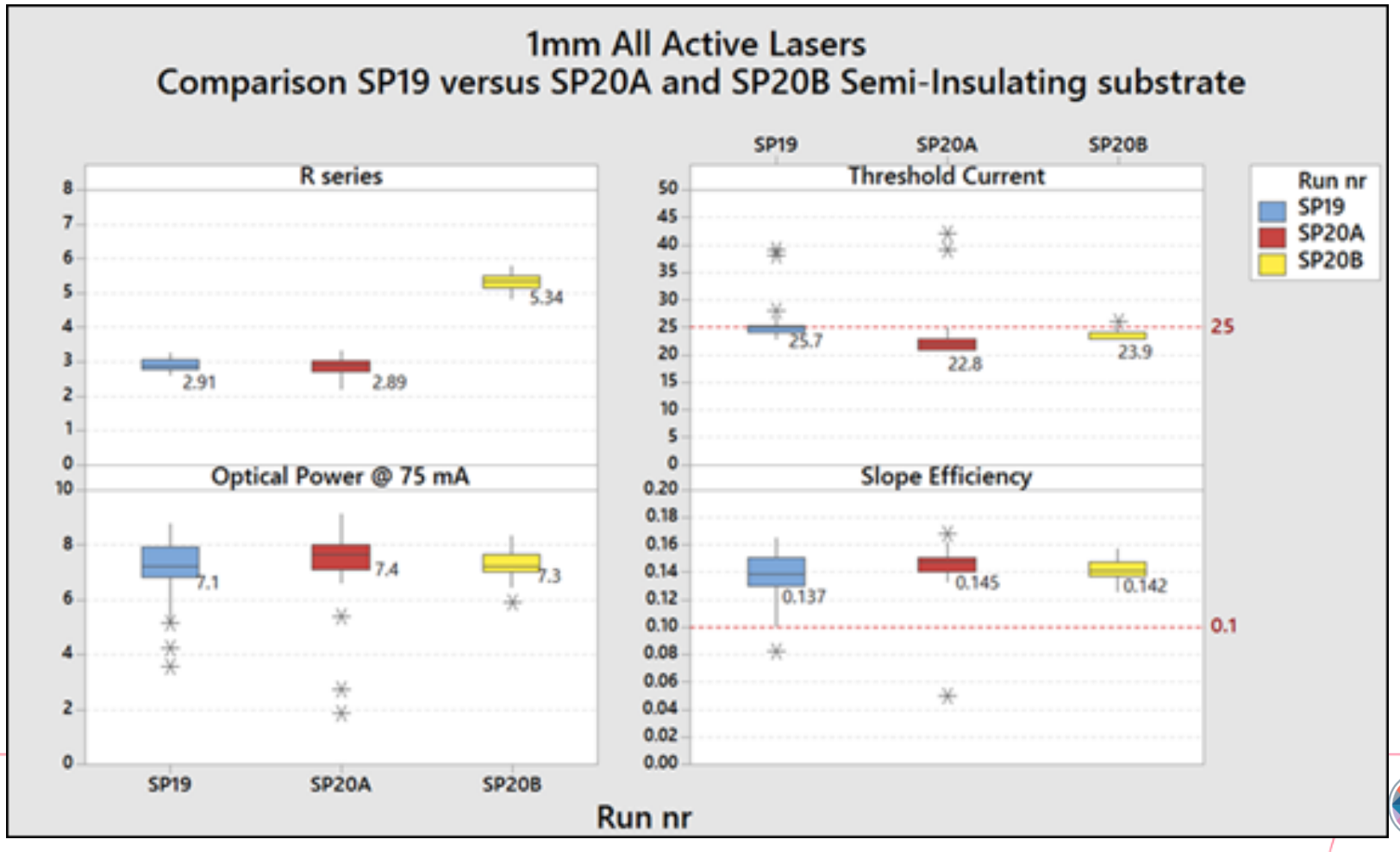
WP20 Delamination Issue:

- Root cause has been identified and Process Flow fix has been implemented on running (and future) batches

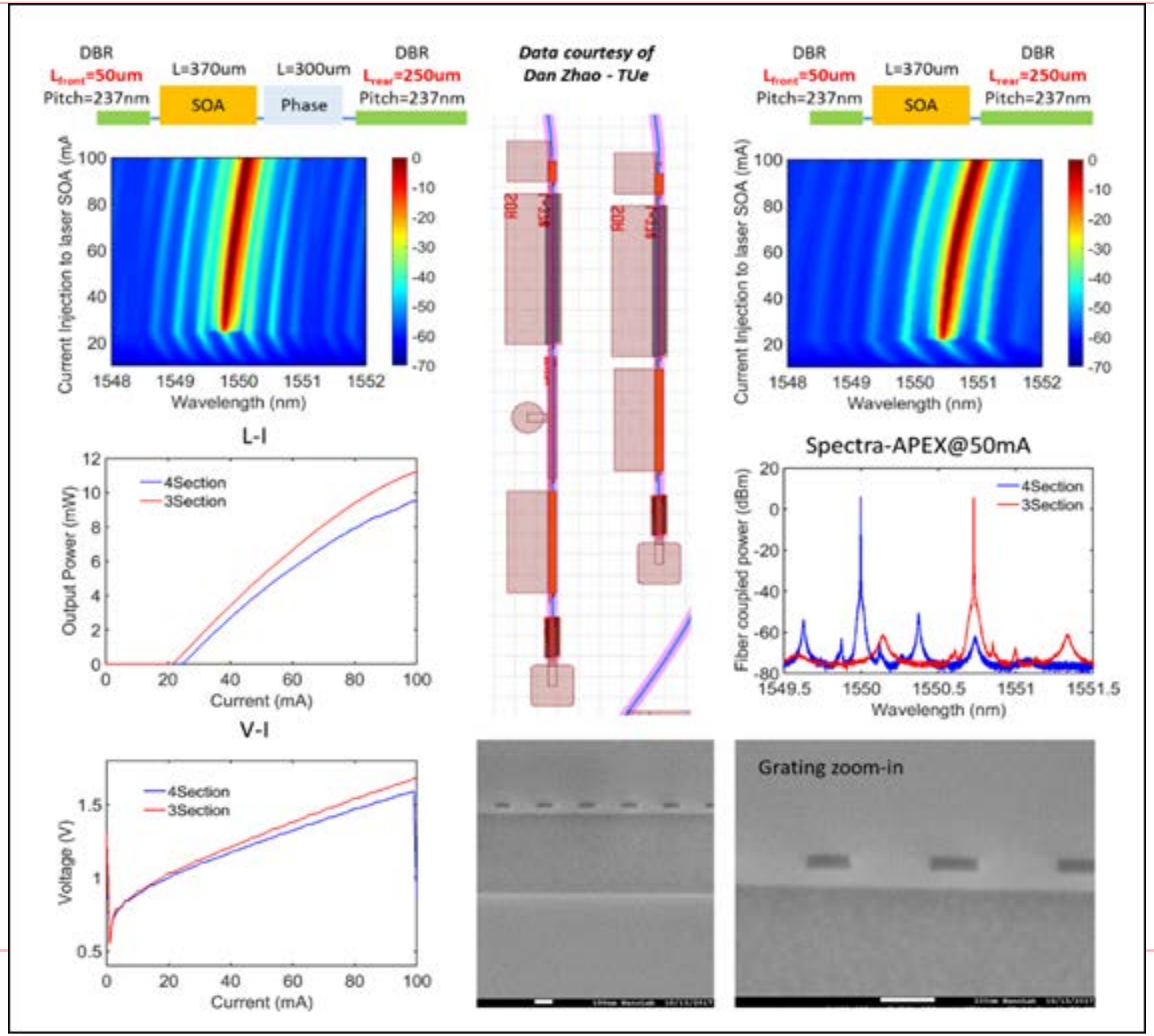
WP2.2.-M3.1 Generic BB Improvements - Planarisation Sequence on SP20

Achievements: Polyimide Sequence swith implemented going from MPW SP19 to SP20

- Basic 1mm All Active laser parameters on MPW SP20A are equal to or better than SP19.
- SP20A Threshold Current ±23 mA/mm, Series Resistance ± 3 Ohm and Slope Efficiency of ± 14 %



DBR Laser



<u>WP2.3-M1.1: New Building Block Introduction - DBR laser</u>

Achievements: A tunable DBR laser with excellent performance has been implemented in SP19

- Threshold Current ±20mA
- High Output Power up to ±11mW
- Single Mode operation with SMSR > 50dB

Agenda

1. Last meeting's action points
2. Progress and issues to be raised per partner
   a. TU/e
   b. Smart Photonics
   c. Bright Photonics
   d. Effect Photonics
   e. Technobis
3. Summary