MONA
Merging Optics & Nanotechnologies

Introduction

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First MONA workshop, April 7th 2006, Strasbourg

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Agenda

8:30 **Introduction** (chair: Laurent Fulbert, CEA)

- Presentation of MONA — L. Fulbert (CEA)
- MONA frame of reference — D. Holtmannspötter (VDI-TZ)
- European context — M. Wilkens (VDI-TZ)

9:15 **Nano-scale materials** (chair: Roel Baets, IMEC)

Key question:"What are the key issues and challenges in physical understanding and in materials technology?"

Coffee break during the session

11:30 **Equipment and processes** (chair: Rainer Beccard, Aixtron)

Key question: "What kind of equipment is needed for R&D and industrial scale production?"

13:00 **Lunch break**

14:00 **Applications and markets** (chairs: Krassimir Krastev, Opticsvalley & Eric Mounier, Yole Développement)

Key question: "Which limitations of the current solutions could nanophotonics help to overcome?"

15:30 **Final discussion & Conclusion**

16:00 End of the workshop

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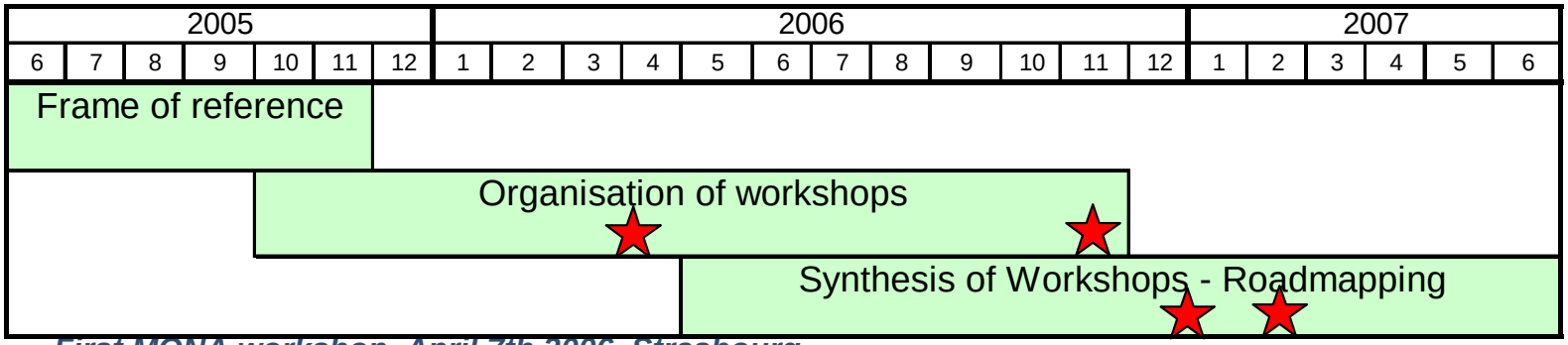
Overview of MONA

- MONA (Merging Optics and Nanotechnologies) is a two-year Specific Support Action supported by the FP6.
- Cooperative work between equipment manufacturers, nanoscale materials and photonics applications experts
- MONA partners: CEA-LETI (F), IMEC-Gent University (B), Acreo (S), Schott (D), Alcatel-Thalès III-V lab (F), Aixtron (D), ASMI (NL), EPIC (F), VDI-TZ (D), Opticsvalley (F), Yole Développement (F)
- MONA will help to identify and address the most critical nanophotonics scientific, technical and manufacturing issues. This will ensure the building of a roadmap addressing materials, equipment and applications
- MONA will directly contribute to the Strategic Research Agenda of the TP Photonics[21]

Methodology

- First workshop: today
  - Set of 3 questionnaires sent to european experts in nanoscale materials, equipment and applications
    - About 40 completed questionnaires received
    - Synthesis with be presented during the workshop to initiate the discussion
  - Outcomes: key issues and priorities
- Second workshop: nov-dec 2006
- Establishment of a roadmap: draft version by the end of 2006, final version in 2007



Key questions

- How could the fabrication of photonics devices converge with CMOS fabrication?
- How could specific photonics devices fabrication processes reach volume production?
- How to mix bottom-up and top-down approaches for the fabrication of nanostructures?
- Bridging the micro-nano gap: connecting the microworld to the nanoworld