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A flexible thin film deposition technology towards vertical integration in optronics

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ABSTRACT OF THE TALK

The platform technology for next generation thin film deposition is under development and optical chips with vertical integration are targeted by ABCD. The capacity to deposit complex oxides (ternary or even more complex oxides) on large substrates required by mass-production, the ability to pattern the properties of the thin films during the growth, and the equipment flexibility for R&D research are the three main key assets of the proposed technology. Thanks to this versatility 3 FP6 European projects have been submitted and funded in the last year. Second generation and third generation equipment are under test and are still improving the performances.
Several results will be shown, like titania and silica (TiO_2-SiO_2) deposition of multi-layer thin films and also co-deposition of embedded 3D structures with graded indexes. The presented reactor versatility is, however, suitable also for any kind of materials deposition.