

"Optical waveguides in crystalline oxide materials: Growth, structuring, characterization, and applications"

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Abstract:

This seminar will review our recent work at the Swiss Federal Institute of Technology Lausanne on optical planar and channel waveguides in sapphire and Ti:sapphire as well as rare-earth-ion-doped  $\text{KY}(\text{WO}_4)_2$ . Growth by liquid phase epitaxy, structuring and refractive-index modification by reactive ion etching, ion beam implantation, and femtosecond laser writing, optical waveguide characterization by propagation-loss, dark m-line, and luminescence measurements, as well as applications as waveguide lasers and broadband light sources for interferometry will be discussed.