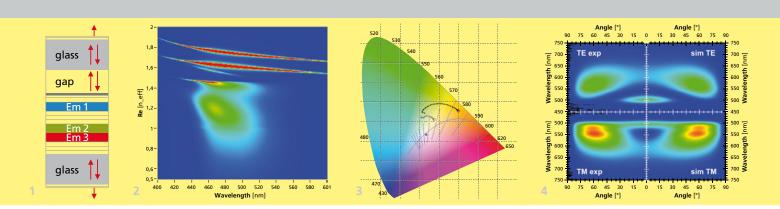


## FRAUNHOFER INSTITUTE FOR APPLIED OPTICS AND PRECISION ENGINEERING IOF



- 1 Illustration of the general stack consisting of arbitrary thin and thick layers.
- 2 Power dissipation by the emitter(s).
- 3 Angular color (CIE x,y) on both sides of a transparent OLED stack.
- 4 Experimental and simulated data to derive emission zone profile and emitter orientation.

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# SIMULATION OF EMITTING THIN FILM SYSTEMS

### Simulation

Spontaneous emission and reflection / transmission problems in layered systems.

- Thin film emission using Green's function approach (coherent layers)
- Multiple emitters (≤10) superimposed
- Arbitrary incoherent layers to consider cover/substrate glass, filters, gaps, ...
- Established applications: Organic LED & photonic crystal fluorescence biosensors

### Our offer

- Software adaptation/extension to your needs including subsequent licensing
- Analysis, characterization, and/or optimization of your system(s)
- Measurement of high quality input data for quantitative simulation, e.g. emitter orientation and/or anisotropic dispersion

### **Key features**

The software Radiating Slabs, result of numerous projects on OLED simulation and emitter characterization, enables you to:

- Model arbitrary emitter orientations with different ensemble averaging modes
- Consider uniaxial material birefringence in any thin film incl. the emitting layer
- Simulate optical excitation for correct photoluminescence analysis
- Optimize a merit function combining different system properties, and perform tolerance analysis of your system
- Vary any system parameter for plotting or data fitting (enables e.g. emitter parameter extraction)
- Use radiometric, photometric, or selfdefined spectral weight functions
- Quickly simulate the desired quantity
- Keep a system definition overview in the main GUI window