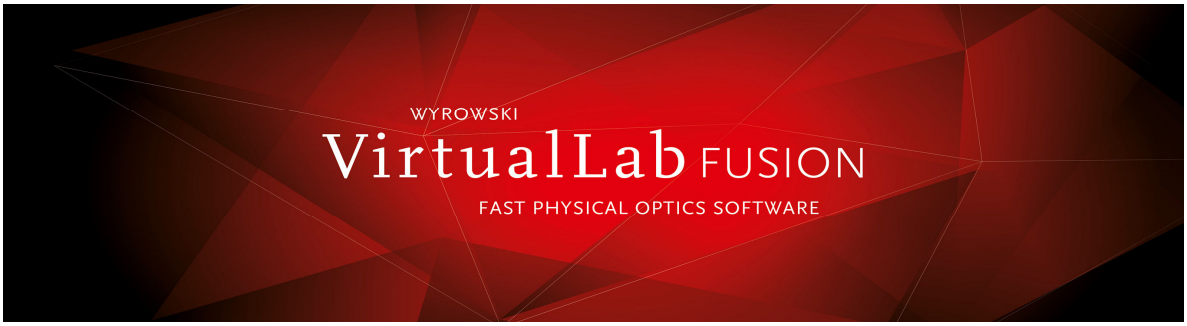
VirtualLab Fusion Version 2021.1

Fast Physical Optics Software

Diffraction, Interference, Polarization, Wavefront Aberrations, Partial Coherence

Simulation, Design, Optimization

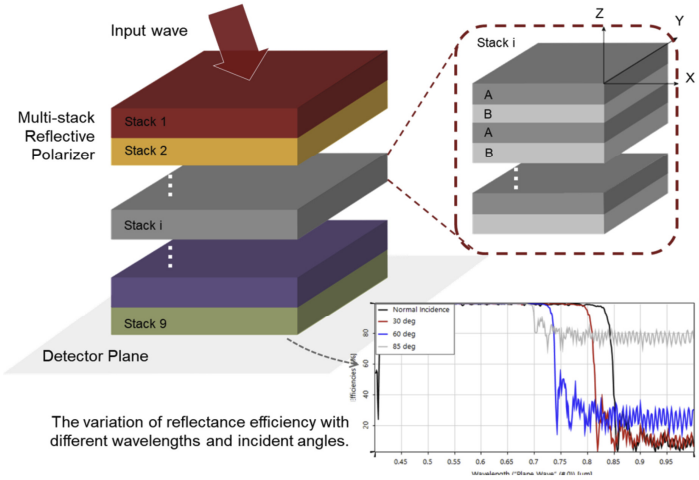


NEW Microlens Array Component (MLA)

Applications such as digital projectors, optical diffusers, 3D imaging
Surface profile is defined by a stack where stack period is the MLA period
Subchannels can be created for non-sequential modeling of each surface of individual microlenes.
Configure each channel for inner, outer or shared soft edges
Show MLA amplitudes and energy densities
Ray tracing to show far field results
Field tracing (fully vectorial) to show near field and far field results

Anisotropic layers - Birefringence

Such as multilayer birefringent reflective polarizers for LCD displays



NEW: Stratified Media Component: Consists of stacks of alternate isotropic and anisotropic layers
Catalog of media and coatings: Choose from predefined media or use template to customize a medium
Parameter Run for scanninq wavelengths, angles and other parameter to calculate efficiency and bandwidth for various numbers of layers
NEW: Waveplate Calculator to determine thickness and retardation of a waveplate with given characteristics
S-Matrix solver works in k-domain for fully vectorial field tracing

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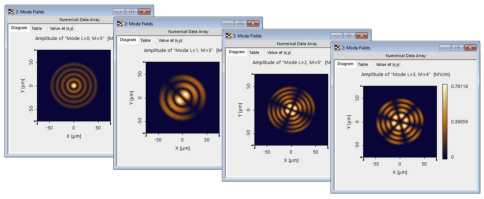
NEW Fiber Features



Fiber Mode Calculator to analyze LP Bessel and LP Laguerre modes for step-index and graded-index fibers
LP Mode Light Source for propagation of LP modes through any optical system
Multimode Fiber Coupling Efficiency Detector evaluates the overlap integral of the incident beam with the LP modes
Calculates propagation constants and mode fields of all existing LP modes and diffraction patterns

NEW: Multiple Light Source Component

Supports partially coherent light sources except panel type and scanning source
Supports coherent combination for polychromatic primary light sources
Load light sources from catalog, then edit and view parameters
Parameter coupling to link related parameters e.g. repositioning group of sources together
Simulate additive mixing of wavelengths
Observe coherence effects: For plane waves at different incident angles and linear phases

More New Features

Improved Zemax import into VirtualLab
Improved workflow: seamless transition from ray tracing to fully vectorial physical optics
More detailed 3D view of optical setup for ray tracing and field tracing
Easier, more versatile procedure for coatings: Coatings are now a sequence of materials instead of homogeneous materials
Many more performance and convenience features
Contact HMS Technology Sales for full Release Notes with more details and examples