TFCompanion Software Release 6.6 build 052026

Semiconsoft, Inc. - TFCompanion release notes

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Release scope: changes since the previous release 6.5

Production Batch

- Added GOF-based multi-filmstack strategy support for ProductionBatch. The strategy can test a sequence of filmstacks and keep the first acceptable or best-GOF result.
- Added strategy sequence template load/save support so filmstack order and GOF trigger can be reused consistently.
- Added optional spectrum-group prediction to try the most likely filmstack first, with fallback to the full sequence if the prediction does not pass GOF.
- Added export of the filmstack actually used for each calculated measurement when a multi-filmstack strategy is active.
- Reordered strategy export columns so core values appear first: Measurement, Filmstack, Thickness, CI, other fitted parameters, GOF, followed by diagnostics.
- Renamed displayed MSE terminology to GOF where the value is the square root of chi-square, improving consistency with the main calculation window.
- Added elapsed-time display during long ProductionBatch runs.
- Reduced UI/statistics/chart refresh overhead for large ProductionBatch runs to improve processing speed on large measurement sets.
- Improved large-folder measurement loading to avoid excessive memory use and UI stalls.
- Added large-set outlier review tools with a dedicated parameter-vs-GOF chart and user-adjustable detection criteria.
- Added export support for outlier marking/exclusion.
- Improved numeric formatting so GOF/MSE-style values are exported in readable decimal format when appropriate.

MultiExperiment

- Added strategy search goals beyond target-thickness matching, including mean GOF and thickness variation/range metrics.
- Added ability to stop a MultiExperiment strategy search after the active optimization completes and still use partial results.
- Added controls to review, save, and export strategy-result filmstacks.
- Improved large-template loading behavior so rows are added progressively instead of blocking the UI for smaller/medium-large imports.
- Extended template parsing to support fixed-layer material assignment in addition to fixed-layer thickness.

Database, Filmstack, and Material Workflow

- Fixed saved/renamed database items so derived records remain in the source group instead of always going to Standard. Applies to filmstacks and other database item types where applicable.
- Fixed renamed filmstacks so the loaded interface shows the current database record name instead of the old internal name.
- Added filmstack group selector and search field to the ProductionBatch strategy filmstack selector.
- Improved resizing behavior in ProductionBatch prepare/strategy dialogs.
- Added database record name copy support from the main sidebar for easier use in

templates.
- Added search support in the measurement load dialog to locate files in large measurement directories.

Optical Material Models

- Added Rakic Lorentz-Drude metal presets for Ag, Al, Au, Be, Cr, Cu, Ni, Pd, Pt, Ti, and W.
- Added Adachi Critical Point material model with presets for Adachi-family UV/NIR semiconductor models.
- Added Djurisic Critical Point material model with presets for Graphite e/o, AlSb, GaSb, and InSb, including original paper references.
- Added Sellmeier presets for fused silica, BaTiO3 Johnston 1971, and GaInP Kaneko 1994.
- Added Sellmeier2 presets for SiO2 Herzinger 1998 and AlGaAs Gehrsitz 2000 fixed compositions.
- Added Lorentz-Lorenz Density material for density-scaled dielectric polarizability experiments.
- Added material preset selection dialogs and improved material description panels showing preset names and references.
- Reorganized material creation tree: Compound Material and Epsilon Interpolated are grouped under Compound Materials; Lorentz-Lorenz Density is under EMA.

Calculation and Optimization

- Adjusted Marquardt parameter step scaling for low-GOF fits to avoid over-amplifying parameter updates when fit quality is already good.
- Improved consistency of GOF reporting between single-measurement calculations and ProductionBatch calculations.
- Clarified confidence interval scaling behavior when measurement standard deviation weights are supplied.

Documentation

- Added user guide document for ProductionBatch multi-filmstack strategy workflow.
- Added this release summary document.