

What is new in UNIFIT 2026?

Main focus of the advancement to the **UNIFIT 2026** software was the completely rework of the programme code and therefore the reduction of the software bugs. Only two additional programme features were implemented. The stability of the software handling, the loading and saving of Unifit projects were improved.

New implemented:

1. The possibility of the loading of defected Unifit projects was implemented. Twelve check points for the finding of incorrect data lines were integrated in the Unifit-Project loading sub-programme. The project check can be activated and deactivated. Spectra windows with a defected data structure were removed and not loaded and all spectra windows with a correct data structure are loaded. The new created Unifit project with the correct data structure can be saved using a new name. The windows number of the new project is lower with respect of the original defected project. The testing and loading of defected Unifit projects can be activated in the dialogue 'Preferences – Unifit Projects'. The dialogue point 'Preferences – X-Axis' was removed. The setting of the X-Axis can be defined direct at the X-Axis of the spectra windows using the right mouse button (see Fig. 1).
2. The batch-file loading of the Croissant data format (*.PESP) was developed and integrated.

Reworked and corrected:

3. The loading and saving of Unifit projects using Focus-CSA data were reworked and corrected,
4. The colour-design code of the edit fields in the dialogue 'Select Windows' was reworked and corrected. In case of a large number of windows, the edit fields are presented exactly.
5. The labelling of the pop-up commands was corrected. The command 'Marker of the Marker Lines' is now displayed correctly.
6. The saving of '3D Waterfall Plus' presentations using Unifit-Projects was reworked and corrected.
7. The option 'Setting: All Std. Windows' in the dialogue 'Subtract Satellite' was reworked, too. Now the excitation satellites were subtracted only one times.
8. The correct presentation and operation of the dialogue 'Parameter Plot' was reworked.
9. The correct working of the five design dialogues:
 - a) Graphs Standard Windows/Wagner Plot (see Fig. 2)
 - b) Axis/Lines/Text (see Fig. 3)
 - c) 3D Plot Waterfall/XY 3D Plot/Color Profile (see Fig. 4)
 - d) 3D Plot Waterfall 0° Plus (see Fig. 5)
 - e) Parameter Plot (see Fig. 6)for the:
 - a) Display or
 - b) Printerusing the three ways for opening;
 - a) [Preferences – Preferences] without open spectra windows
 - b) [Preferences – Preferences] with open spectra windows
 - c) Open of the dialogues from the active window with [Annotation/Design - ...]and the corresponding options:
 - a) 'Transfer to the Active Window'
 - b) 'Transfer to All Windows'
 - c) 'Transfer to Windows' (selected windows)and for the 3D Windows:
 - a) 'Activated Curve'

- b) 'Selected Curves'
 c) 'All Curves'
 and the combination of the options were validated and corrected.

Preferences: C:\Users\B\Documents\Unifit_2020_User_Files\presetting\presetting.set

General

Programme Parameters
 Number of the First Standard Window: 21
 Points to Average: 3
 Maximal Number of Peak-Fit Components: 10
 Maximal Number of XAS Background Steps and XPS Background Functions: 6
 Maximal Number of Presentable Curves inside 'Plot 3D Waterfall': 200
 Maximal Number of Presentable Fit Results inside 'Plot 3D Waterfall Plus': 10
 Maximal Number of Presentable Curves inside 'Parameter Plot': 30
 Maximal Number of Presentable Parameter Steps inside 'Parameter Plot': 30
 Threshold Spike Correction: 20
 Max. Spike Number/‰: 5

Language
☐ German ☒ English

Decimal Character Display/Printer
☒ Point ☐ Comma

Unifit Projects
☐ Save Backup Files ☒ Open with Quantification and Film Thickness Table
 Defected Unifit-Projects are tested and loaded with that function.
 This function is deactivated automatically after the next Unifit-Project Loading.
☒ deactivated ☐ activated

Y-Axis
☐ Counts ☒ Counts per Second

Toolbar
☒ Activate Toolbar

Background XPS-Quantification Right Mouse Button
☐ Constant ☐ Linear ☒ Shirley ☐ Tougaard ☐ Polynom+Shirley

Text Dialogs
 Arial, 16, Standard, Standard, Standard

Display

Graphs Standard Window/Wagner Plot
 3D Plot Waterfall/XY 3D Plot/Colour Profile
 Parameter Plot

Axes/Lines/Text
 3D Plot Waterfall 0° Plus
☐ Dark Mode

Load/Define Transmission Function T(E)
 Loaded T(E): ESCALAB220_TWIN_SAE150_50EP.trm

Peak Fit/Calculation Procedure
 Fit Procedure
☒ Convolution ☐ Sum ☐ Product
 Parameters Peak Fit/XAS-Background/XPS-Background (INHOM)
☒ Absolute ☐ Relative
 Tougaard-Background Calculation
☒ Homogeneous Samples ☐ Inhomogeneous Samples
 Calcul. of Fit-Parameter Errors
☒ Iterative ☐ Matrix Inversion
 T(E) Calculation QPA Method
☒ Step by Step ☐ Randomize

Export
 Resolution Images
☐ Monitor Resolution
☒ 400 dpi ☐ 600 dpi ☐ 800 dpi ☐ 1000 dpi ☐ 1200 dpi
 Text Table Images
 Times New Roman, 12

Decimal Character Data
☒ Point ☐ Comma

Delimitation Data
☐ Comma ☐ Semicolon
☒ Tabulator ☐ Space

Import

Sources

Al Ka	Mg Ka	He I	He II
1486.6 eV	1253.6 eV	21.2 eV	40.8 eV

Batch Processing
☐ Load Original Spectra
 Number of Iterations per Cycle = 10
 Number of Cycles = 2

Display/Printer/Peak Fit
 ☒ All Window ☐ Windows ☐ Only Window 0

☐ Show Preferences

Fig.1 Screen shot: Dialogue for definition of the presets of the programme handling

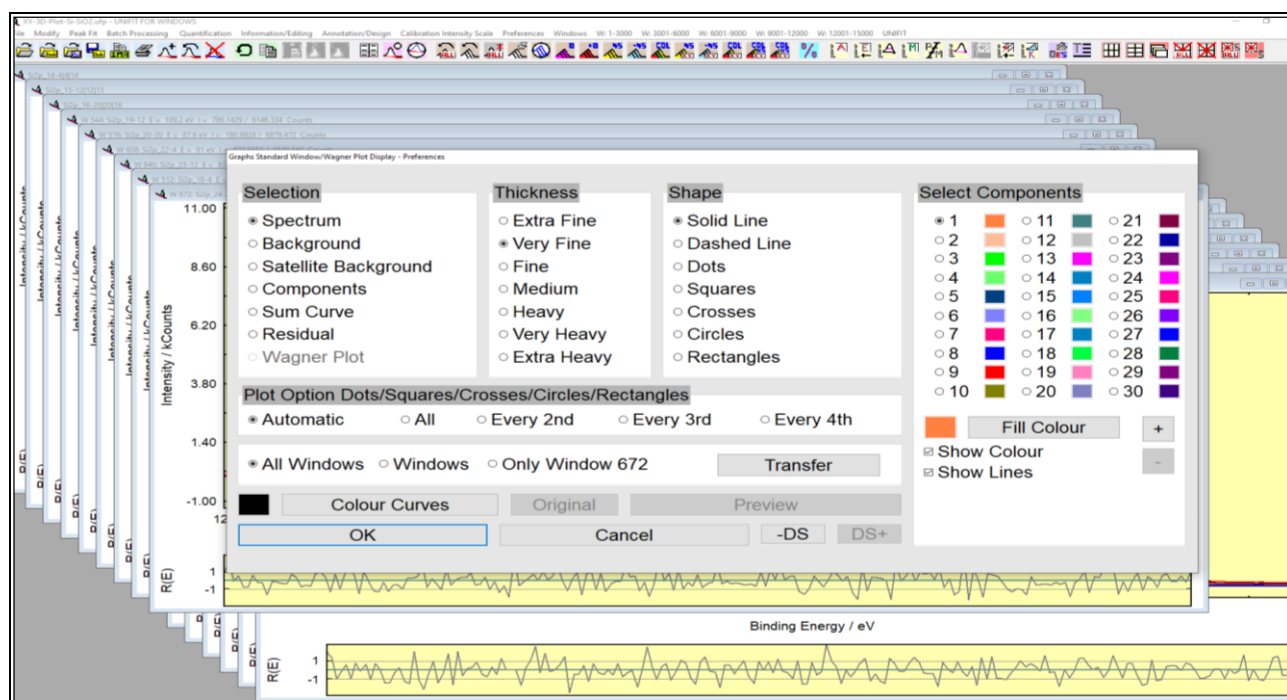


Fig. 2 Screen shot: Dialogue for setting of the preferences of the shape, thickness and colour of all curves displayed on the screen, setting of the fill colour of the components of the peak fit (Graphs Display)

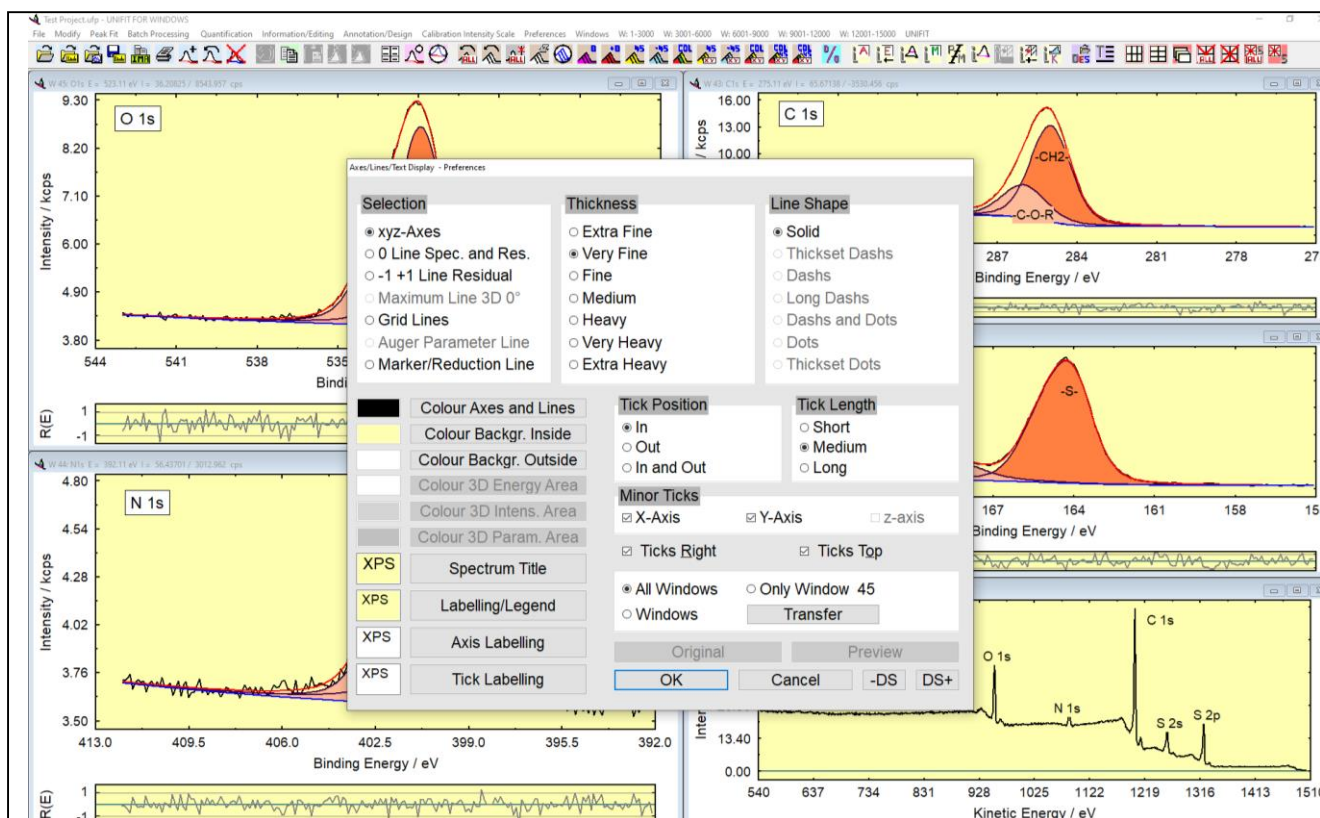


Fig. 3 Screen shot: Dialogue for setting of the preferences of the shape, thickness and colour of all displayed axes, lines and characters

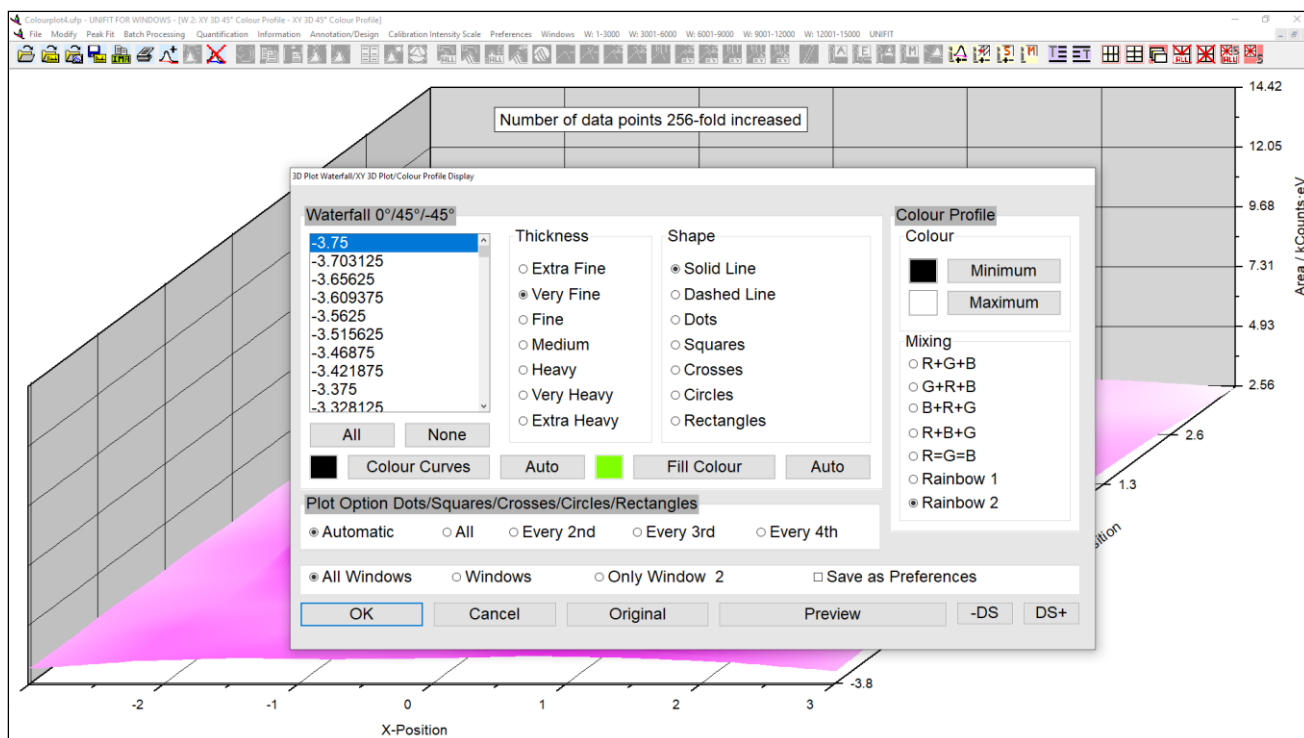


Fig. 4 Screen shot: Dialogue '3D Plot Waterfall/XY 3D Plot/Colour Profile Display' for setting the shape, thickness, and colour and fill colour of the 0°, 45° und -45° as well as the Transfer Project Settings to Preferences

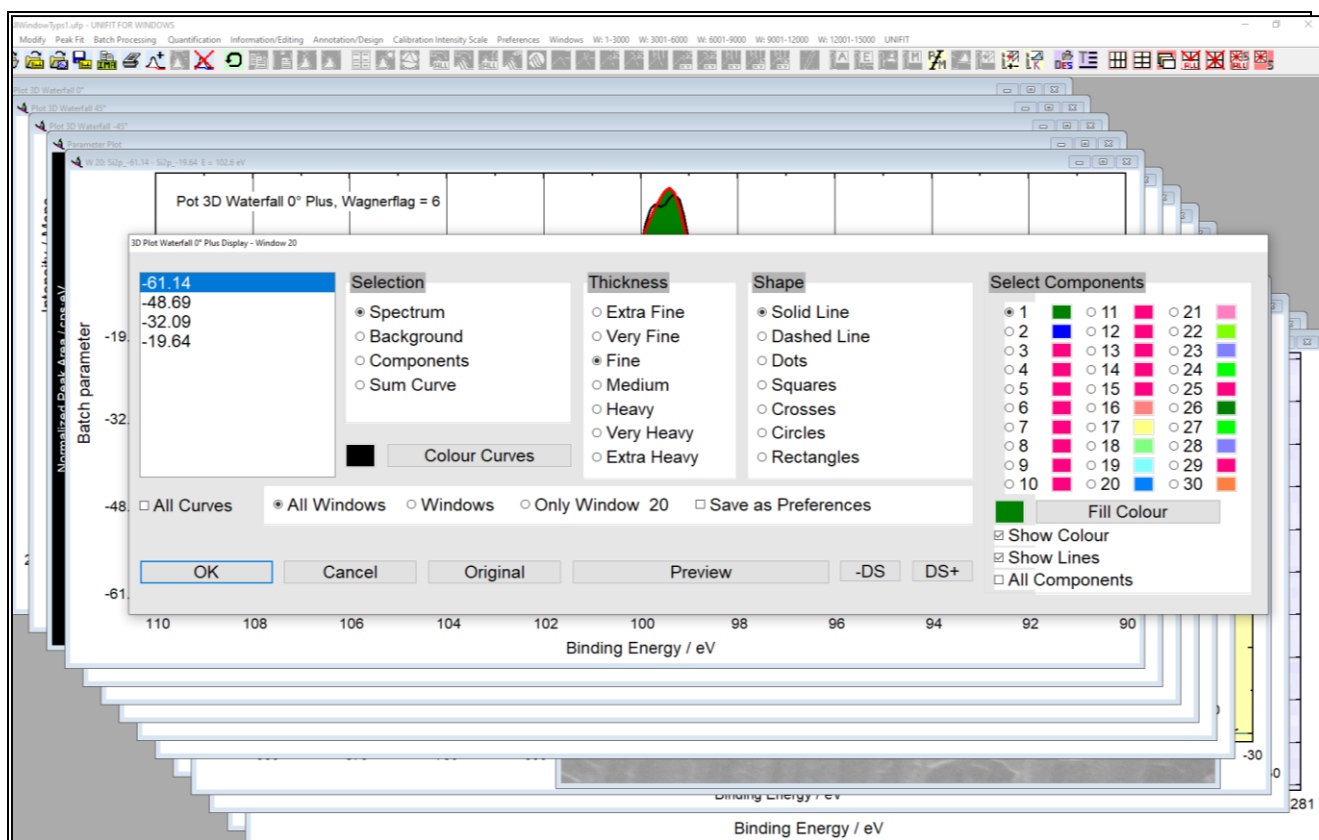


Fig. 5 Screen shot: Dialogue for setting the shape, thickness, and colour and fill colour of the components of fitted spectra plotted using the '3D Plot Waterfall Plus 0° Display'

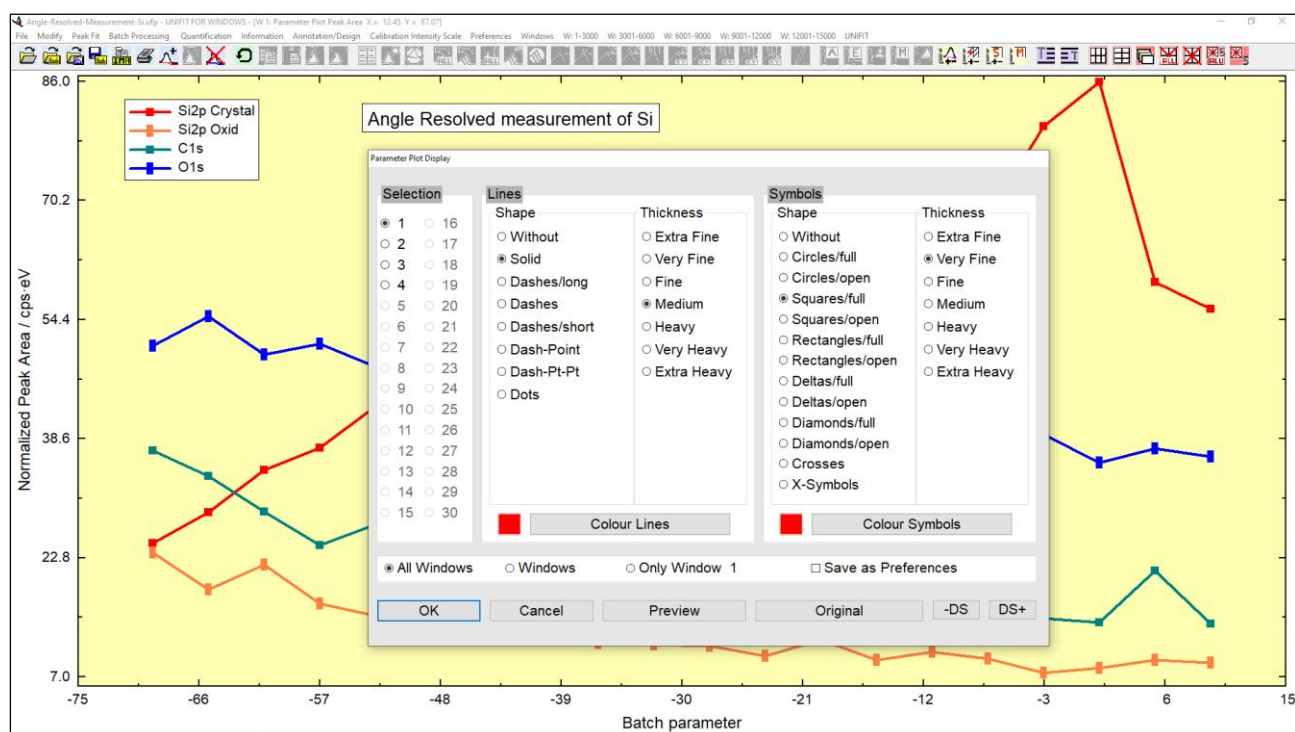


Fig. 6 Screen shot: Dialogue for setting the colour, shape and thickness of the parameter plot displayed on the screen