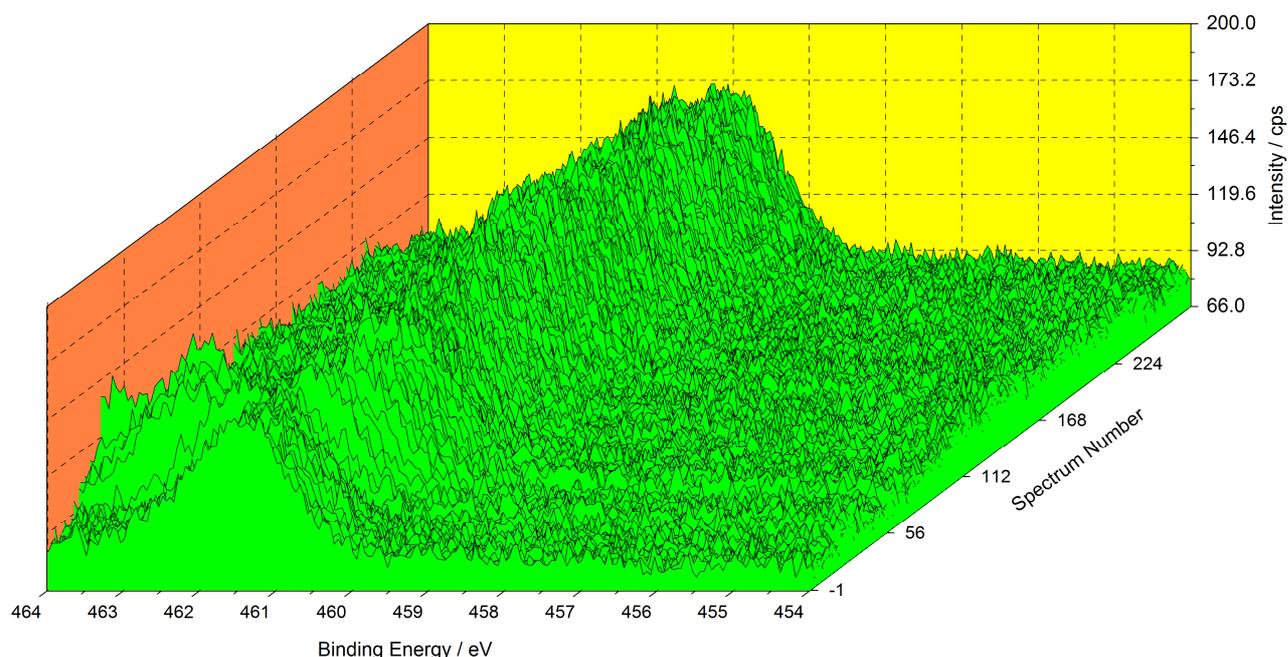


## What is new in UNIFIT 2012?

The **version 2012** was mainly developed improving the design functions. Additionally, the source code of the software was optimized.

**i)** The pixel number of the monitor plot was increased by two from extra small (1 pixel) to extra large (7 pixels).

**ii)** The maximum number of spectrum windows was increased to 300 (see Fig. 1). The window selection functions were modified accordingly.



**Fig. 1.** Plot 3D Waterfall 45° of 280 Ti 2p spectra created using UNIFIT 2012, exported (600 dpi) and inserted into this Word document

**iii)** The active window can be changed using the Page Up and Page Down keys.

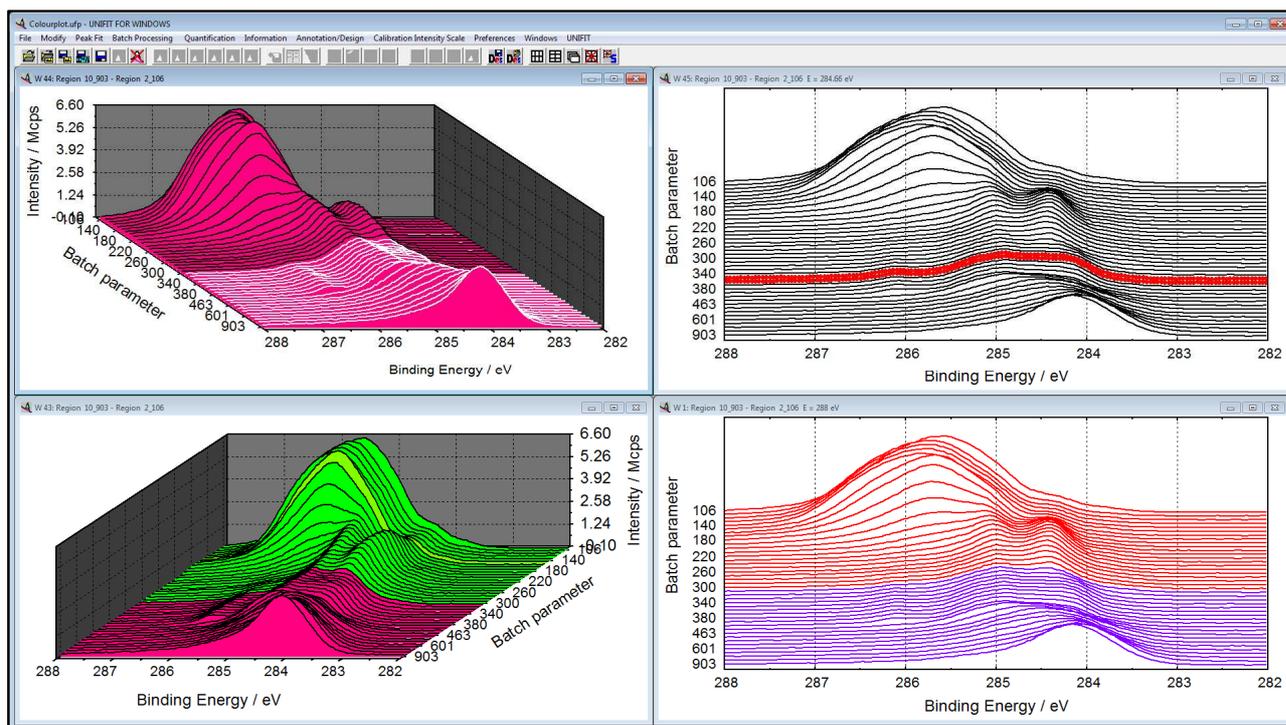
**vi)** The resolution of the exported images was increased by two steps (800 dpi and 1200 dpi).

**v)** In order to improve the data transfer between table-calculation software (Excel, Origin ...) and UNIFIT the input of batch parameters (sputter time, emission angle ...) via the clipboard was integrated.

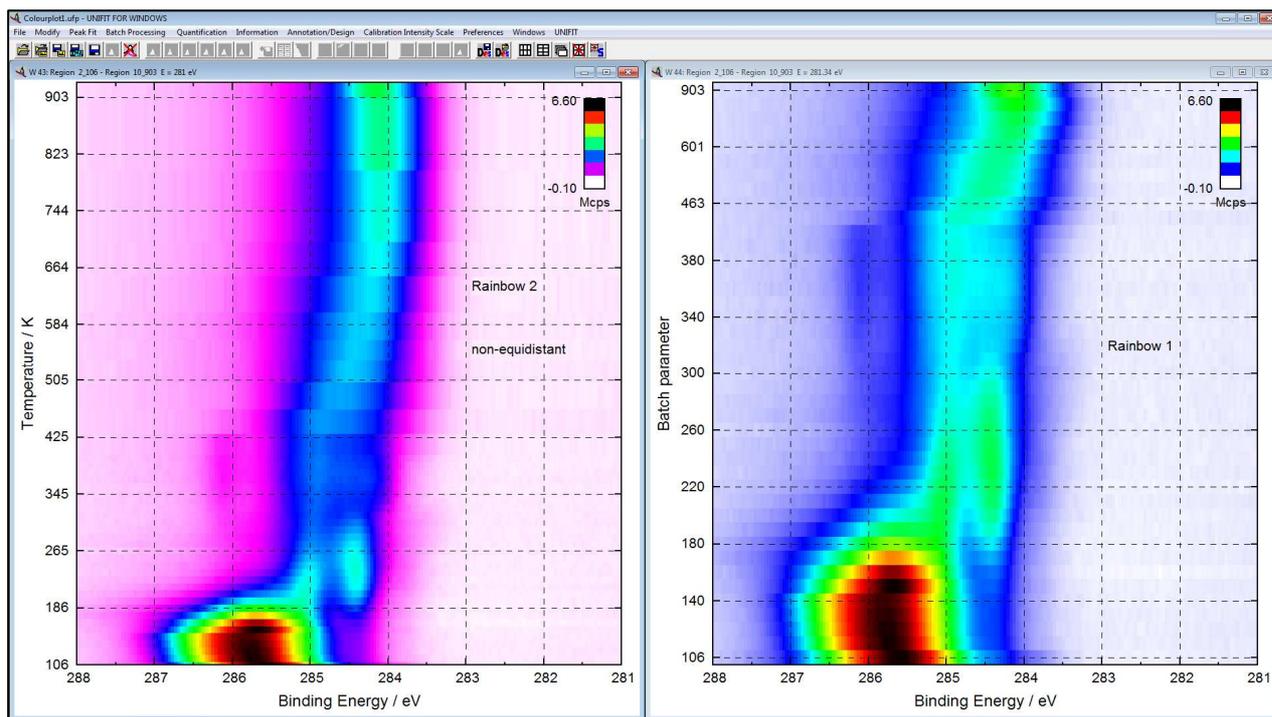
**vi)** Up to 30 curves can be plotted with the parameter plot.

**vii)** The data export from the 3D plots was optimized taking the smallest step width from the entire energy axis for each of the spectra in the 3D plot.

**viii)** The monitor and printer setting of the colour, form and size as well as the fill colour of each curve of the 3D plots can be defined separately (see Fig. 2). Additionally, the design options of the colour plot were increased (manual definition of the minimum and maximum colour, different colour superposition modes, and rainbow plots, see Fig. 3).

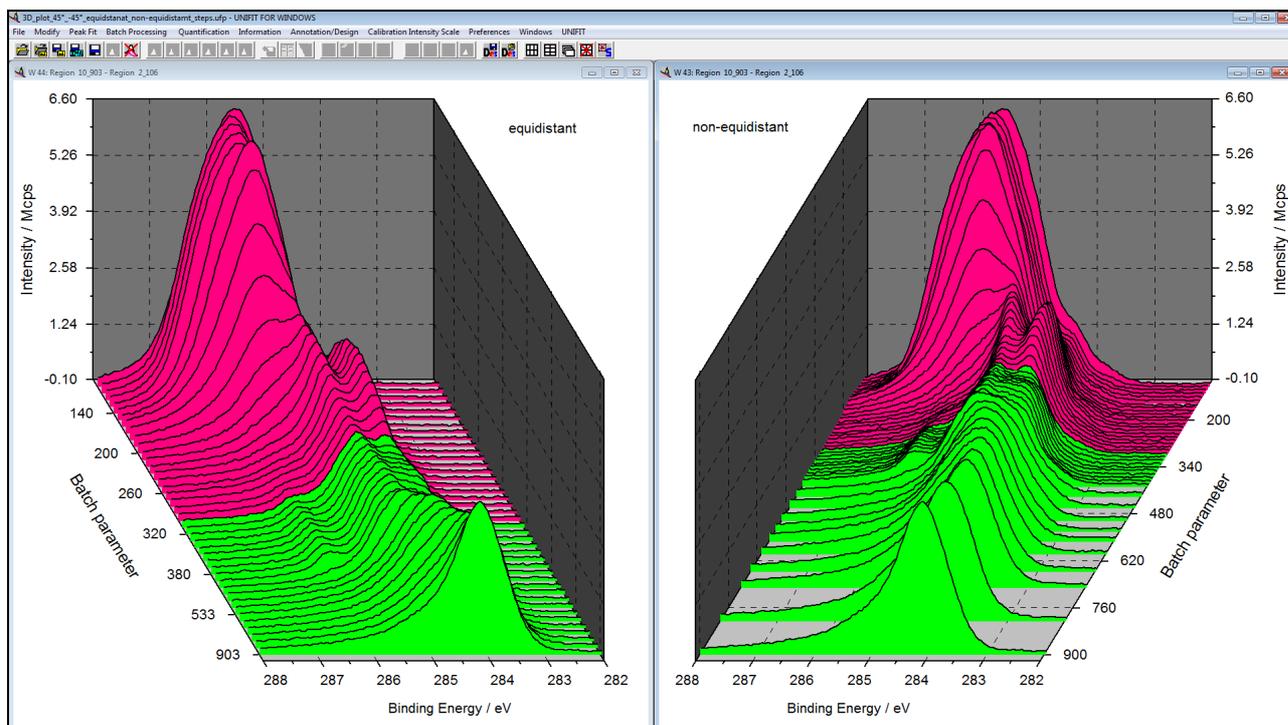


**Fig. 2.** Screen shot of four 3D plots of a Platinum sample covered with Pyridine, left: Plot 3D Waterfall 45° and -45°, right: Plot 3D Waterfall 0°



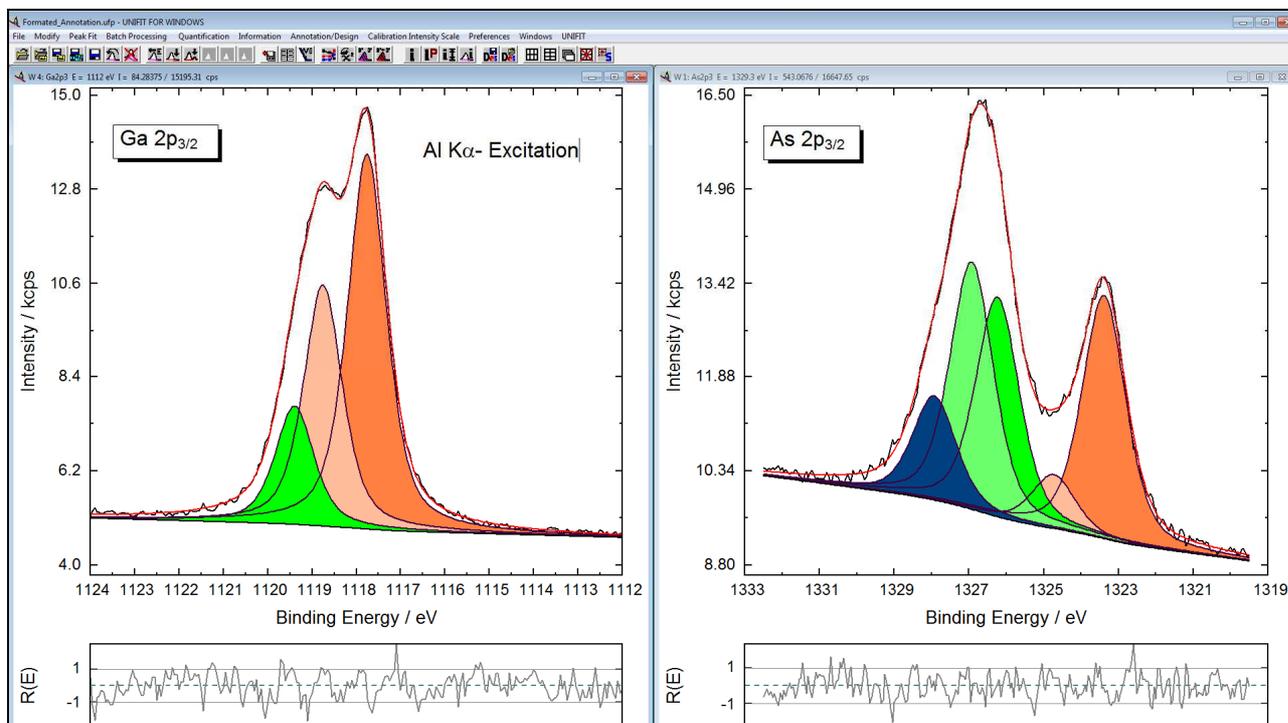
**Fig. 3.** Screen shot of a Platinum sample covered with Pyridine, left: Colour plot Rainbow 2, right: Colour plot Rainbow 1

ix) A non equidistant step width of the parameter axis can be selected optionally (true parameter steps).

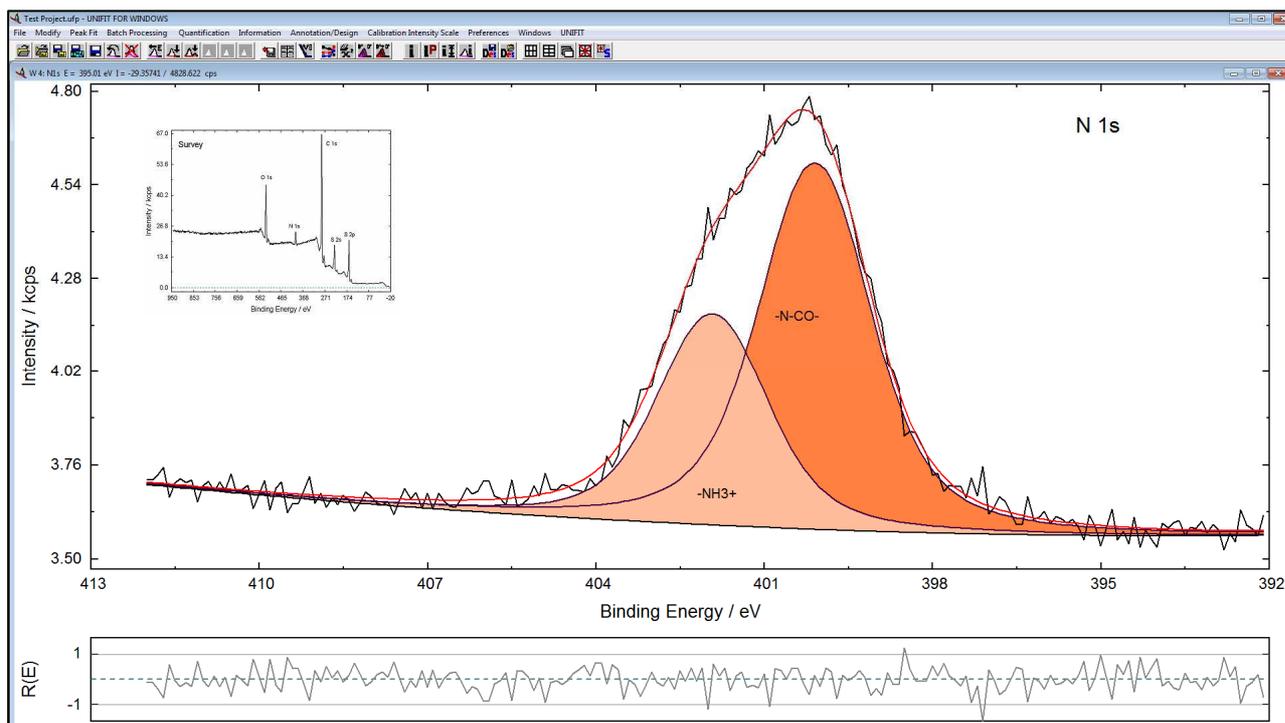


**Fig. 4.** Left: Plot 3D Waterfall  $-45^\circ$  with equidistant parameter steps, right: Plot 3D Waterfall  $45^\circ$  with non equidistant parameter steps (true parameter step width)

**x)** The introduction of formatted annotations (superscript, subscript, bold, italic, Greece) allows a more exact labelling of the spectra (see Fig. 5). The used \*.rtf format permits a simple data transfer with other software (Word, Excel) via the clipboard. This way can be used to implement equations or pictures into the UNIFIT windows (see Fig. 6).



**Fig. 5.** Screen shot of two standard windows of UNIFIT 2012 with formatted annotations of the region name and the excitation source



**Fig. 6.** Screen shot of a standard window of UNIFIT 2012 (fitted N 1s spectra), embedded the corresponding survey

- xi)** Measurement data saved in the VAMAS format can be loaded from the clipboard.
- xii)** Measurement data with a non-equidistant step width can be loaded.
- xiii)** The UNIFIT software can be started by clicking of the Unifit-project files (\*.ufp).
- xiv)** The displayed decimal character (point or comma) can be selected optionally.