EXAMPLE 2
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This example illustrates rigid registration of elemental maps (EDX) onto an SEM micrograph.
The SEM micrograph are already calibrated but the EDX data is without a scale bar.
Before starting Correlia FIJI tools have to be employed in order to put a scale to the EDX maps.

1.) open the SEM micrograph as well as the EDX-stack in FIJI
2.) scroll through the stack of EDX maps
3.) make a z-projection of the stack (image->stacks->Z project; select maximum intensity)
    -> this will open a new image with many more features than in the single maps

(The result is image EDX_zprj.tif)

4.) add a slice to the EDX stack (at the end of the stack! use image->stacks->add slice)
5.) copy the z-projection image into that empty slice of the stack (CTRL-A, CTRL-C, CTRL-V)
6.) close z-projection image but keep SEM and EDX stack open
7.) calibrate EDX stack
    a) drag a line (FIJI line tool) between two features in th SEM image and measure their distance
    b) drag a line between the corresponding features in the EDX stack
    c) give the focus to the EDX stack and select the FIJI tool set scale (analyse->set scale)
    d) set known distance to the value measured in the SEM image and set units to "microns"

(The result is EDX_C-N-O-P-S-Fe_calibrated.tif)

8.) close SEM micrograph and EDX-stack

9.) run Correlia with the SEM image as canvas (base image); change project name to "example2" (project->project properties)
10.) in the Correlia main frame select "project->add image to project" and select the calibrated EDX stack in the file chooser
    a) a dialogue will open: select import stack as separate images
    b) name the images one after another "C", "N", "O", "P", "S", "Fe", "zprj"
11.) in the image list set all EDX maps to invisible except for "zprj"
12.) set colour of "zprj" to green and colour of "SEM" to red which allows for better recognising their difference

Project state: example2_a

13.) select "zprj" and link its coordinates to the other EDX maps (ring symbol on the right)
   -> an alignment of "zprj" will then be applied to the other EDX maps which naturally should have the same coordinates
14.) register the EDX stack using auto alignment (mutual information); use only tranlation since rotation and scale are fine already
15.) set "zprj" to invisible and set colour of the SEM micrograph to grey
16.) switch on EDX maps, change their colour and play with the different representations

Project state: example2_b

17.) use the FIJI mask tool and drag a mask around an interesting area
18.) in correlia main frame select "Data processing-> export image"
     and export the selected area as an RGB image to FIJI for further processing