Standard Operating Procedure

for

**SLOPEY**

**Analysis of RGB images (*Select the RGB tab*)**

Regional Slope: (*Select the Regional Slope tab*)

Graphical user interface

Description automatically generated

1. Load OM images:

Click the **Load OM images** button and select images of the flake taken at different light intensities. Make sure the flake position is unchanged in these images and none of the images are saturating. A set of example images can be found in the example folder. Once selected, one of these images will be shown in the **Image** box.

1. Select substrate region:

Click the **Select substrate region** button. A popup window will come up, and the user has to select the substrate region. (Select the substrate near flake)

1. Mention the **number of regions** for which you want to measure slope.
2. Select regions:

Click the **Select Regions** button. Again, a popup window will come, and the user has to select flake regions one by one for the mentioned number of regions.

1. Select the **channel** for which you want to calculate the slope.
2. Click **Calculate** button. The intensity variation will be shown in the **Substrate intensity vs flake intensity** box for each selected region. The slope for each region will be shown in the **table**.

Slope Map: (*Select the Slope map tab*)

Graphical user interface, application

Description automatically generated

1. Load OM images:

Click the **Load OM images** button and select images of the flake taken at different light intensities. Make sure the flake position is unchanged in these images none of the images are saturating. A set of example images can be found in the example folder. Once selected, one of these images will be shown in the **Image** box.

1. Select substrate region:

Click the **Select substrate region** button. A popup window will come up, and the user has to select the substrate region. (Select the substrate near flake)

1. Select Region of Interest:

Click the **Select Region of Interest** button. Again, a popup window will come, and the user has to select the region on the image for which the Slope Map will be produced.

1. Select the **Channel** for which you want to calculate the slope map.
2. Click **Calculate** button. A Slope Map will be calculated and shown in the **Slope Map** box along with a colorbar.
3. To save this colormap data, one has to click the **Save data** button. A popup window will come to select the folder where the data need to be saved.

**Analysis of RAW images (*Select the RAW tab*)**

Regional Ratio: (*Select the Regional Ratio tab*)

Graphical user interface, application

Description automatically generated

1. Select OM image:

Click the **Select OM image** button and select image of the flake taken in RAW format. Make sure the image is not saturating. A set of example images can be found in the example folder. Once selected, one of these images will be shown in the **Image** box.

1. Select substrate region:

Click the **Select substrate region** button. A popup window will come up, and the user has to select the substrate region. (Select the substrate near flake)

1. Mention the **number of regions** for which you want to measure ratio.
2. Select regions:

Click the **Select Regions** button. Again, a popup window will come, and the user has to select flake regions one by one for the mentioned number of regions.

1. Click **Calculate** button. The ratio for each region corresponding to different channels will be shown in the **table**.

Ratio Map: (*Select the Ratio map tab*)

Graphical user interface, application

Description automatically generated

1. Select OM image:

Click the **Select OM image** button and select image of the flake taken in RAW format. Make sure the image is not saturating. A set of example images can be found in the example folder. Once selected, one of these images will be shown in the **Image** box.

1. Select substrate region:

Click the **Select substrate region** button. A popup window will come up, and the user has to select the substrate region. (Select the substrate near flake)

1. Select Region of Interest:

Click the **Select Region of Interest** button. Again, a popup window will come, and the user has to select the region on the image for which the Ratio Map will be produced.

1. Select the **Channel** for which you want to calculate the Ratio Map.
2. Click **Calculate** button. A Slope Map will be calculated and shown in the **Ratio Map** box along with a colorbar.
3. To save this colormap data, one has to click the **Save data** button. A popup window will come to select the folder where the data need to be saved.