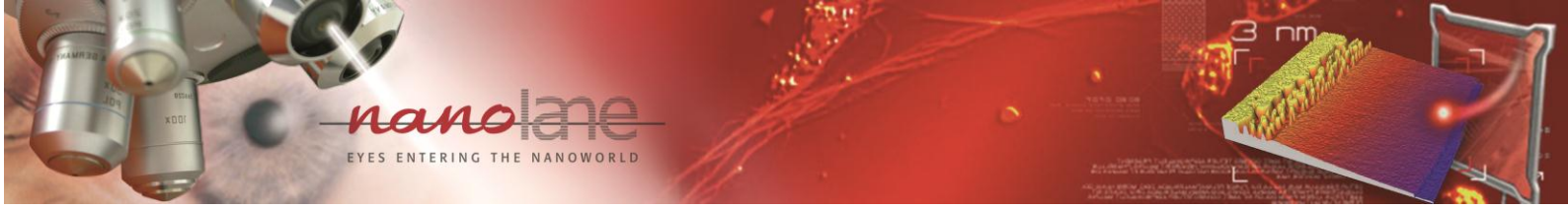


S A R F U S M a p p i n g *Lite*

Turn YOUR optical microscope into a measuring nanoscope!

What is SARFUS Mapping *Lite*?

SARFUS Mapping *Lite* is a hardware-free plug-in that renders your existing optical setup (i.e. an upright reflected light microscope associated with a colour camera) capable of measuring the optical thickness of thin transparent films in air up to 60 nm in thickness.

Each component of this product has been carefully chosen to ensure the image conversion to be a smooth process that requires very little practice.

Like all SARFUS products, SARFUS Mapping *Lite* is based on the patented SEEC[1] optical microscopy technique (Surface Enhanced Ellipsometric Contrast).
It uses novel non-reflecting substrates – commonly referred to as *SURFs* in Nanolane jargon – that bring about a contrast enhancement of about 2 orders of magnitude.

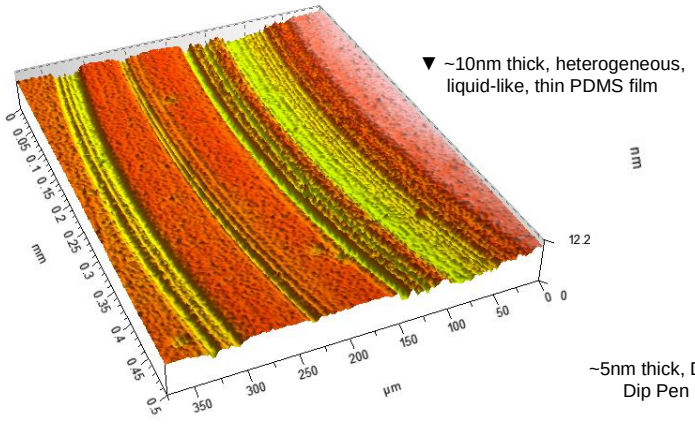
After you and we have done some experimenting with your system, Nanolane will provide you with an estimate of its accuracy, precision and limit of detection. This aspect is characteristic of SARFUS Mapping *Lite* and puts it in a category of its own within the SARFUS family.

Nano-thickness measurements with **your** microscope/digital-camera set are made possible thanks to Sarfusoft *Lite*, our slim proprietary piece of software that correlates the interference colours of a sample image with a set of traceable step height standards.

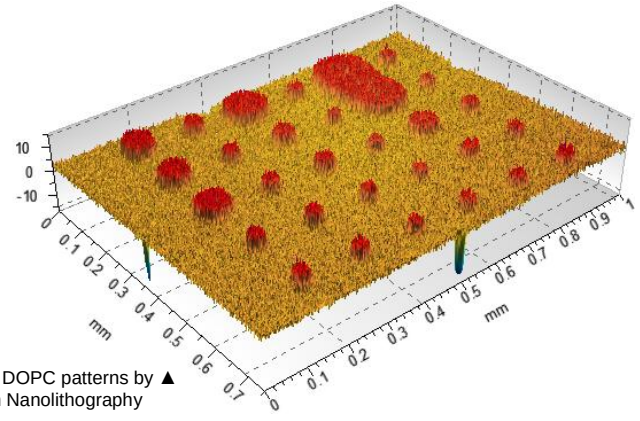
[1]: Optics Express, Vol. 15, Issue 13, pp. 8329-8339 (2007)

SARFUS Mapping *Lite* Applications

- **Thin films, surface treatment & life science**
  - **Langmuir-Blodgett films**
  - **Self-Assembled Monolayers (SAMs)**
  - **Polymers, Liquid Crystals**
  - **Ultrathin oxides, nitrides, etc.**
  - **Biochips**
  - **Soft-lithography, patterns, etc.**



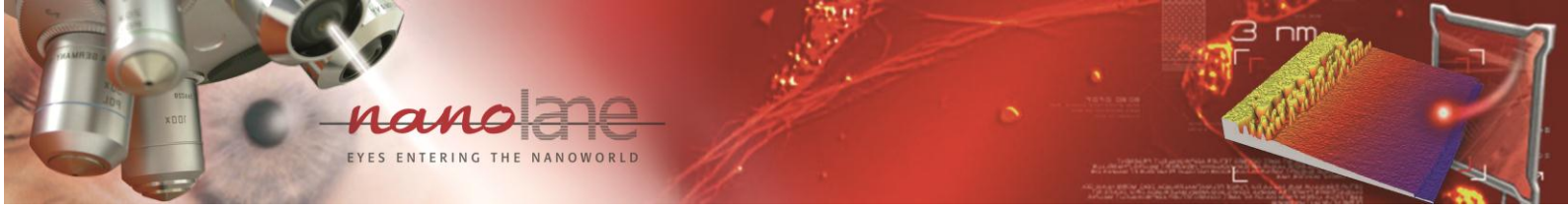
▼ ~10nm thick, heterogeneous, liquid-like, thin PDMS film



~5nm thick, DOPC patterns by ▲ Dip Pen Nanolithography

Content of the SARFUS mapping *Lite* solution

- **1 copy of Sarfusoft Lite v1.0 along with 1 USB dongle and user's manual in pdf format on a CD**
- **Free software updates for one year from delivery date**
- **1 generic box of 49 opaque, SiO_2 SURFs (SAUS-10-B49)**
- **1 calibration standard (contains a series of flights of 7 step height standards!)**
- **1 year's worth of customer support through phone/e-mail/Skype**



SARFUS Mapping *Lite* Features

- ❑ **High sensitivity (z-axis)**
  - 1-D nano-object (film): 0.1nm(1) in thickness at best
- ❑ **Non-destructive and non-invasive**
- ❑ **User friendly & Fast processing**
  - Familiar technology (optical microscope)
  - No need for specific training
- ❑ **Lateral resolution**: down to 350nm
- ❑ **Measurement range: 0.1nm(1) to 60nm**
- ❑ **Repeatability: down to** 0.2 nm(1) (according to ISO 17025)

(1) As measured on our dedicated SARFUS Mapping station. The capabilities of your set-up will be estimated by Nanolane at its facility during the qualification procedure.

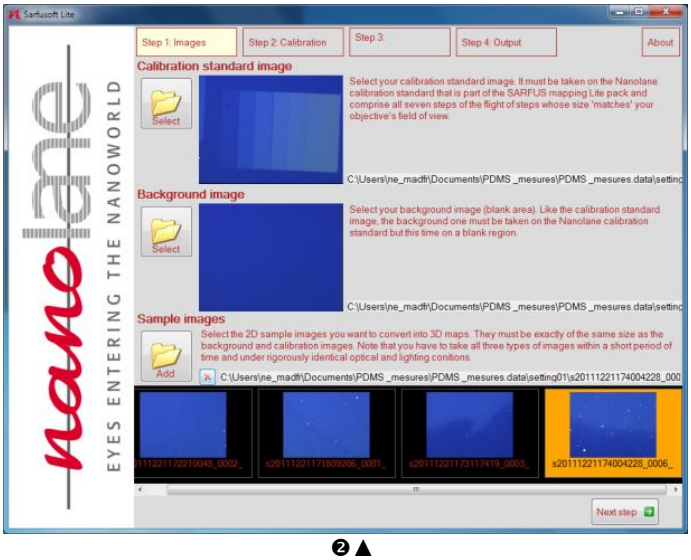
How to use it?

❶ Acquire images of your sample and the calibration standard

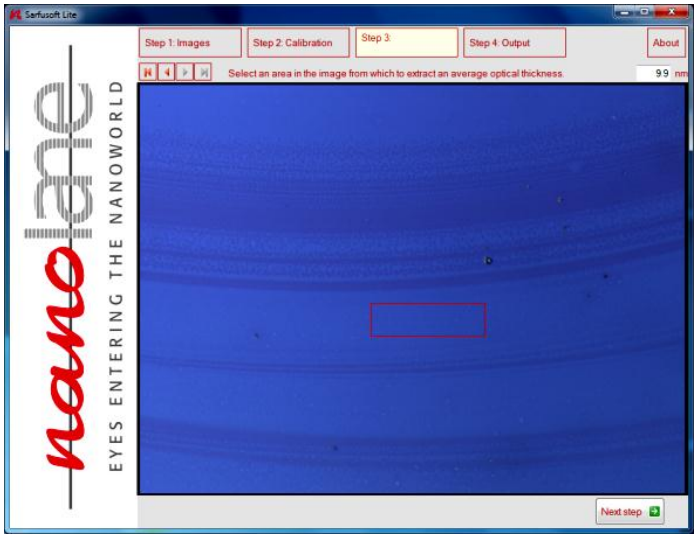
❷ Import these images into Sarfusoft *Lite*

❸ View calibrated images and get optical thickness values

❹ Export optical thickness maps as Mountains, *.csv z-matrix or (x, y, z) *.txt files for further analysis



❷▲



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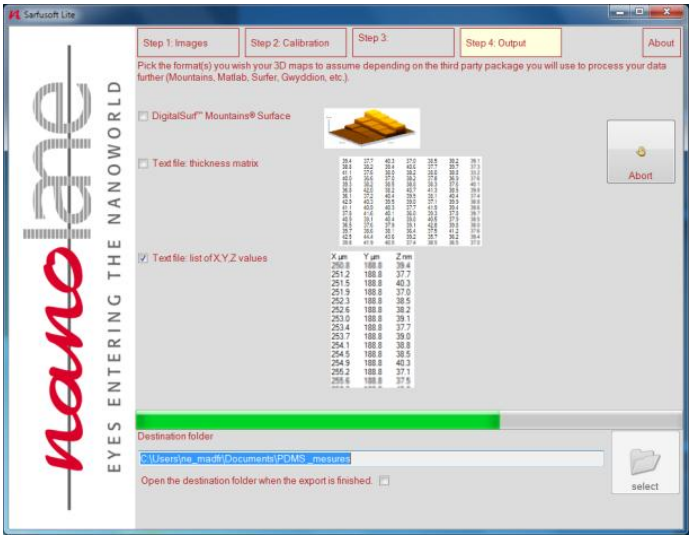

NANOLANE
Z.A.E La Pécardière
72450 Montfort le Gesnois
France

Tel: +33 2 43 540 900
nanolane@eolane.com
www.nano-lane.com
www.nano-microscopy.com