

SILKNOW.

Silk Heritage in the Knowledge Society: from punched cards to big data, deep learning and visual/tangible simulation

*Report. Study of historical silks by Scanning Electron
Microscope (SEM) and Inverted Optical Microscope
(LMi)*

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Fig. 1 (LM) Silk Threads-Lab/1



Fig. 2 (LM) Silk Threads-Lab/2



Fig. 3 (LM) Silk Threads -Lab/3

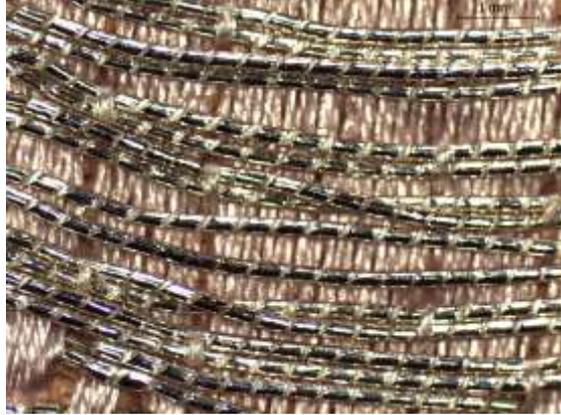


Fig. 4 (LM) Silk Threads -Lab/4



Fig. 5 (LM) Silk Threads -Lab/5



Fig. 6 (LM) Silk Threads -Lab/6

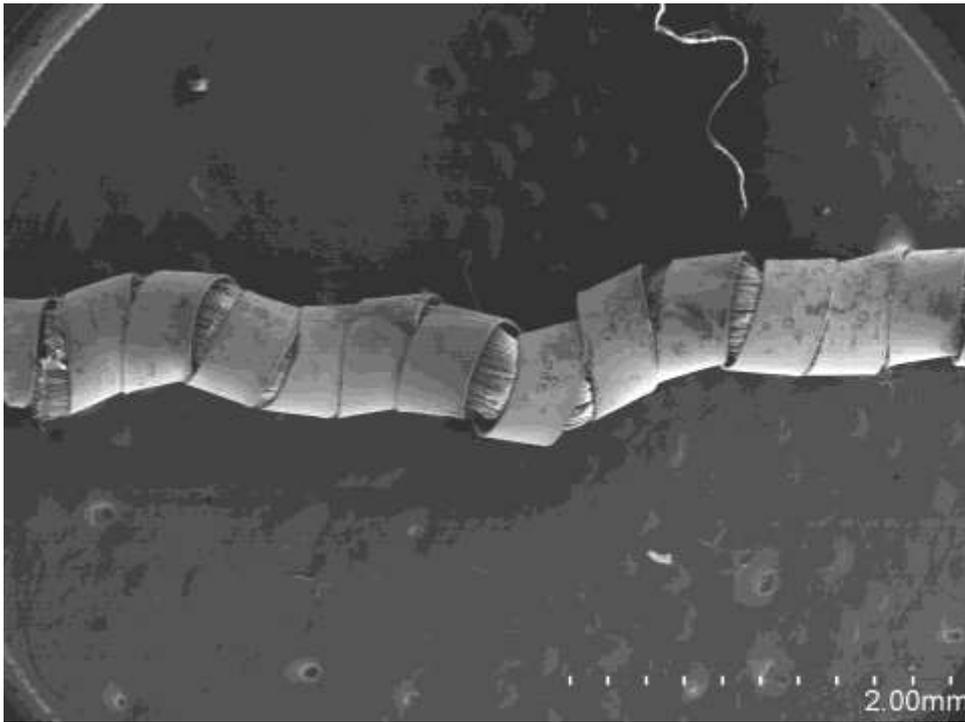


Fig. 7 (SEM) Silk Threads -Lab/4

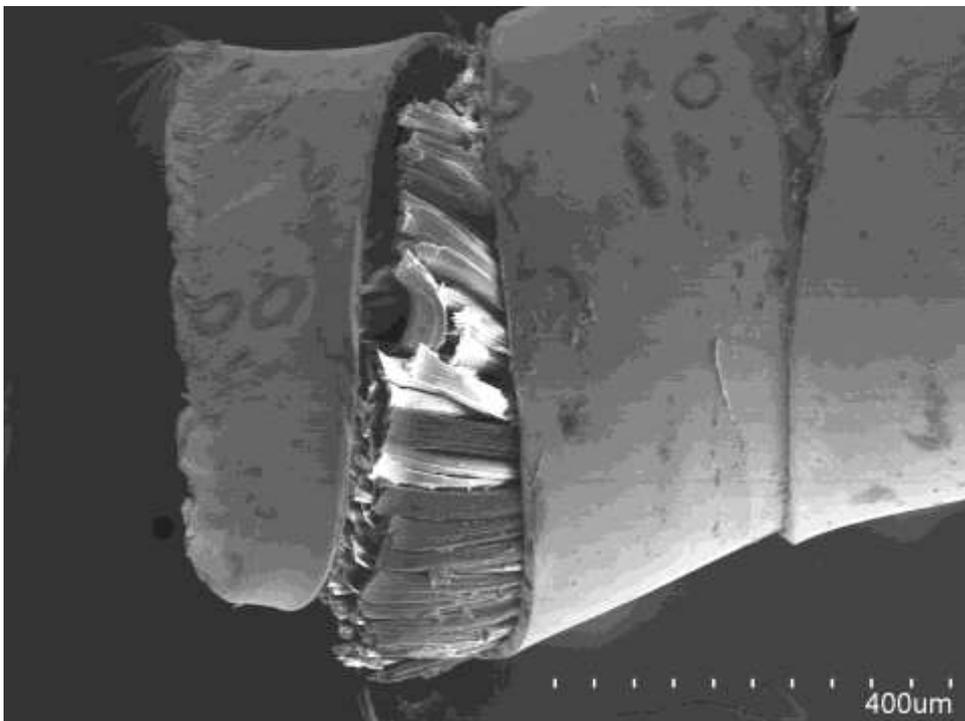


Fig. 8 (SEM) Silk Threads-Lab/4

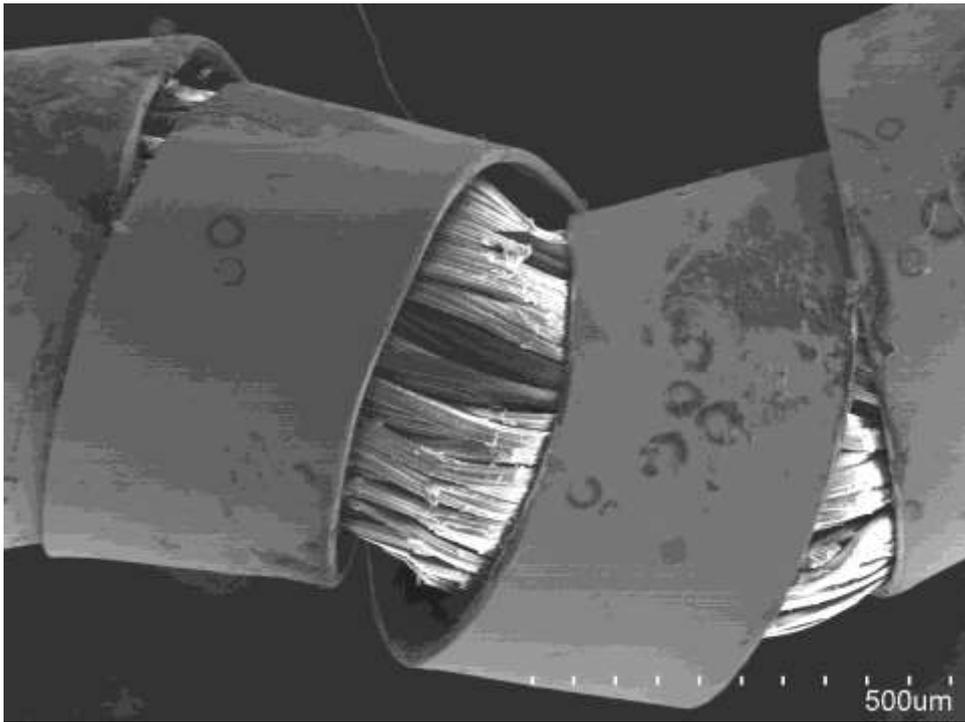


Fig. 9 (SEM) Silk Threads -Lab/4

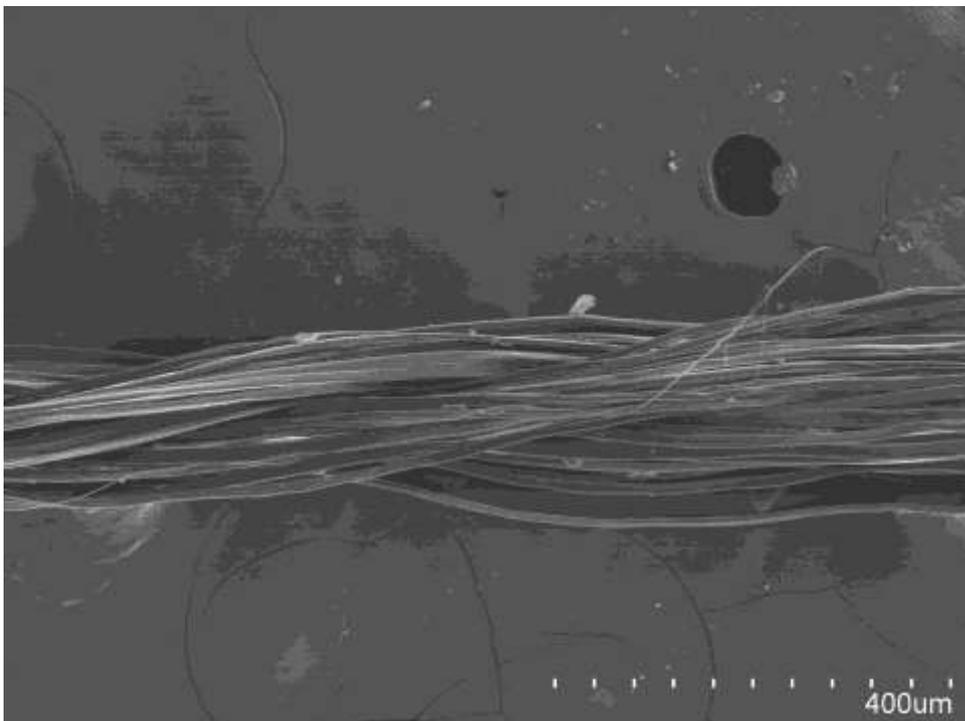


Fig. 10 (SEM) Silk Threads -Lab/1

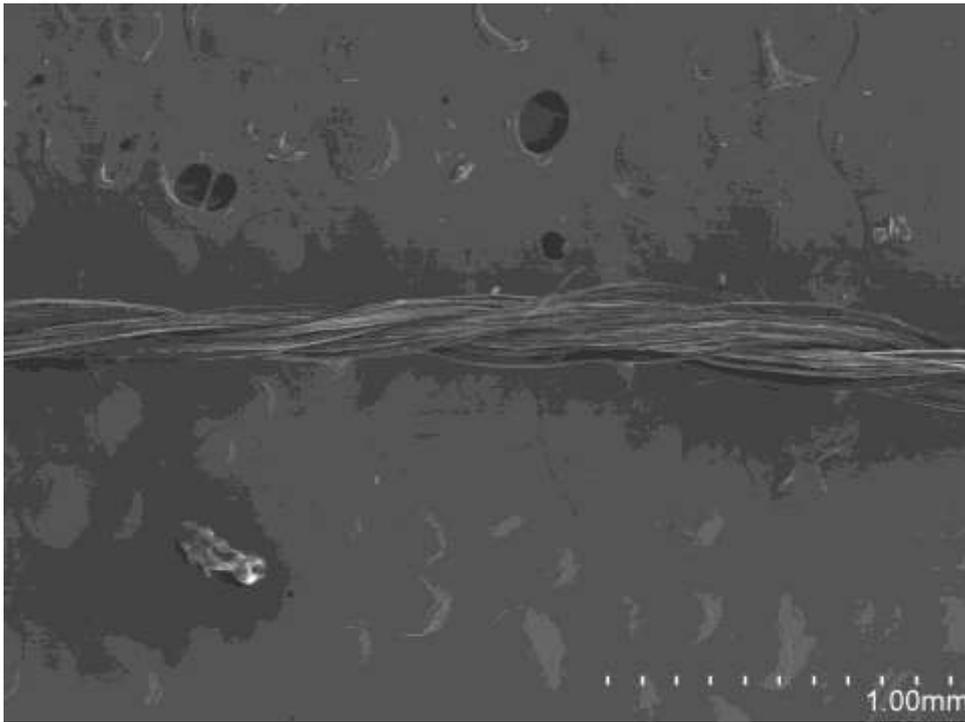


Fig. 11 (SEM) Silk Threads -Lab/1

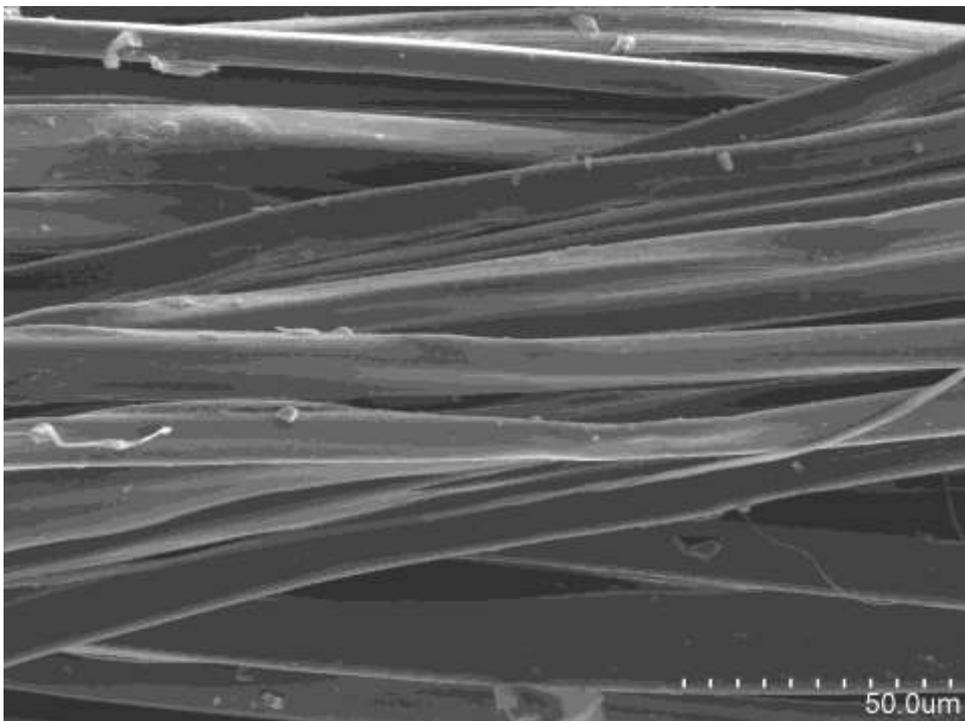


Fig. 12 (SEM) Silk Threads -Lab/1

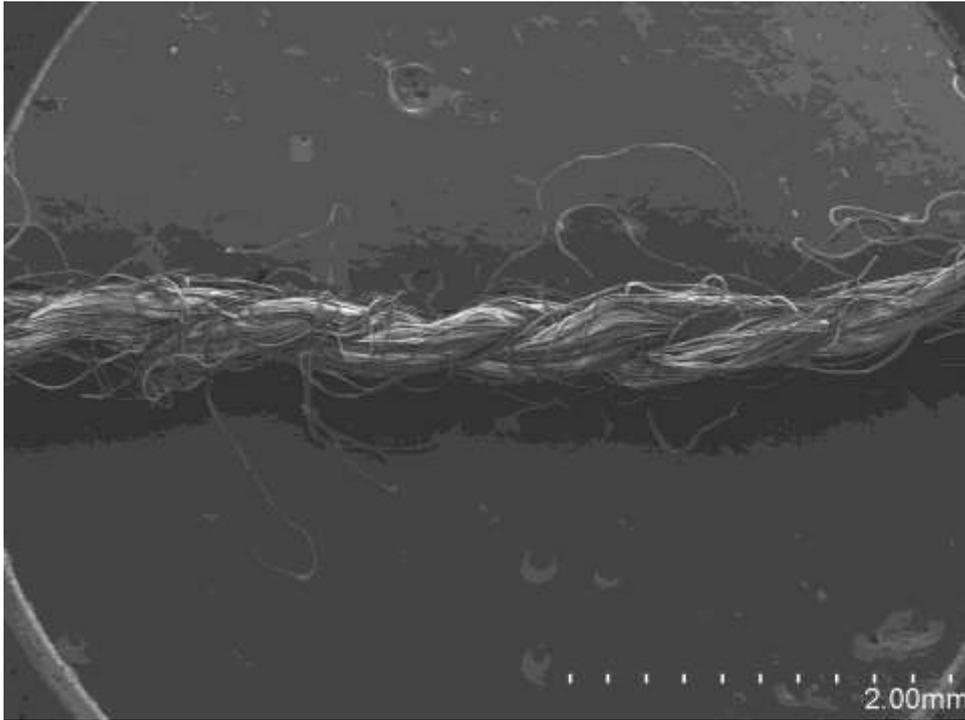


Fig. 13 (SEM) Silk Threads -Lab/5

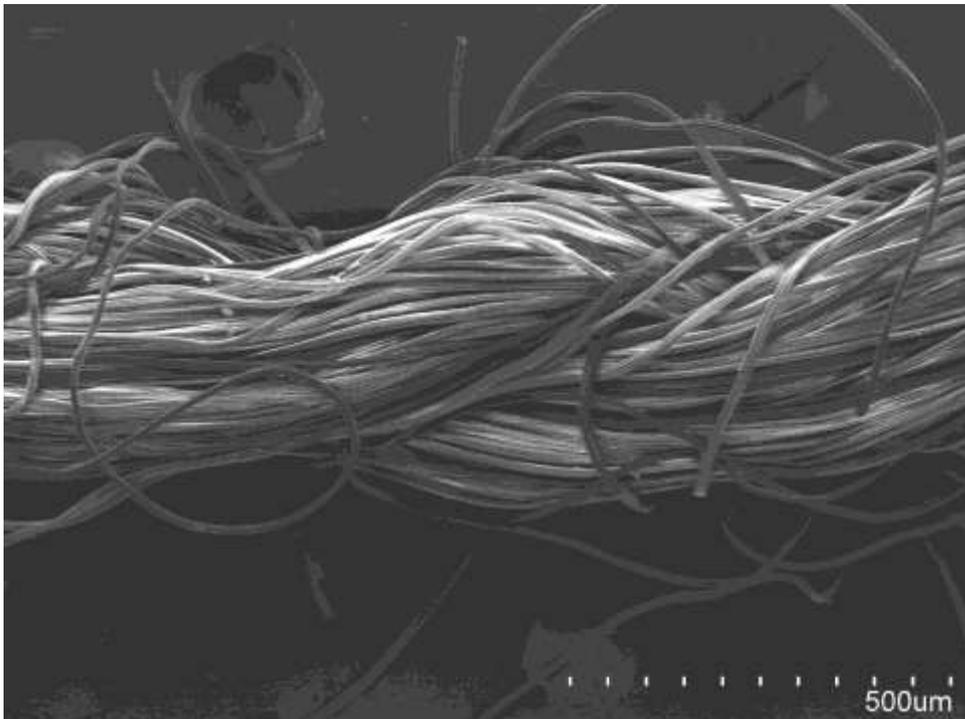


Fig. 14 (SEM) Silk Threads -Lab/4



Fig. 15 (SEM) Silk Threads -Lab/4

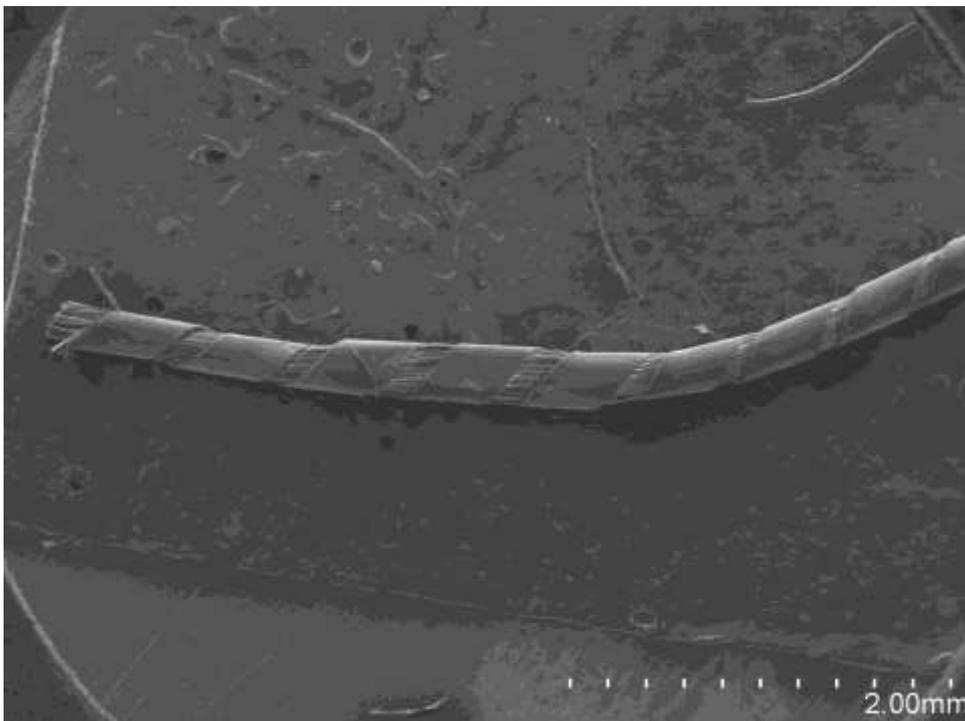


Fig. 16 (SEM) Silk Threads -Lab/6

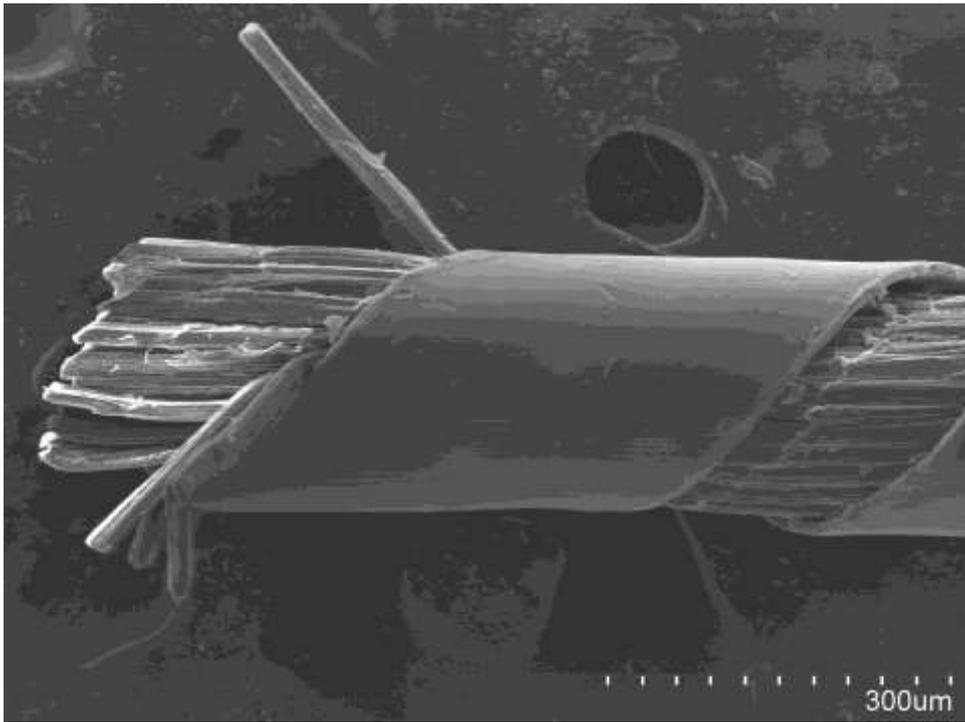


Fig. 16 (SEM) Silk Threads -Lab/6

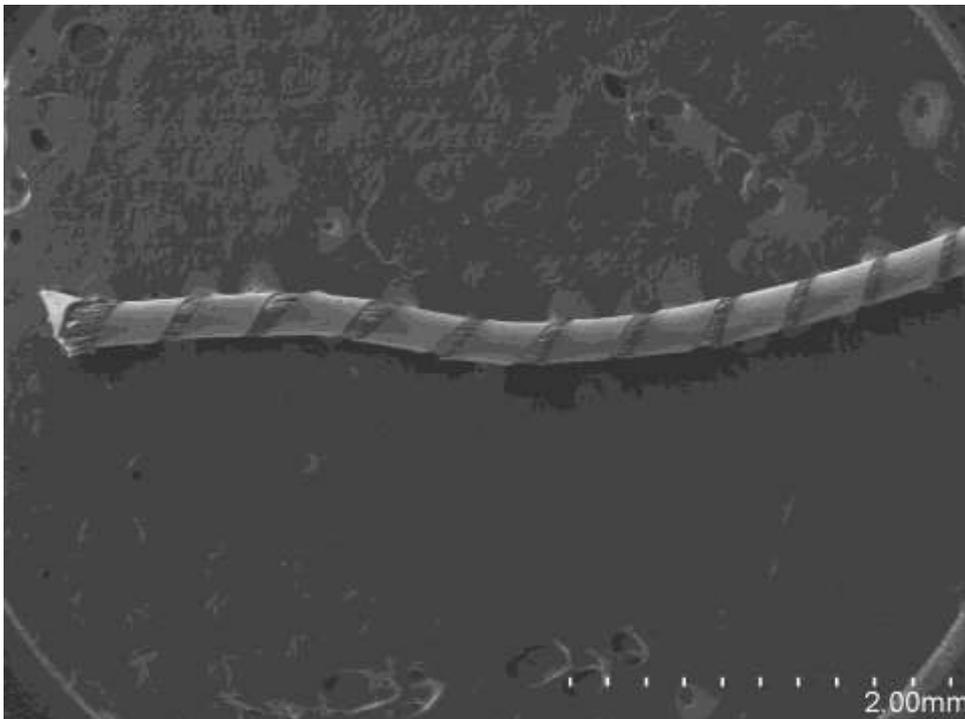


Fig. 17 (SEM) Silk Threads -Lab/6

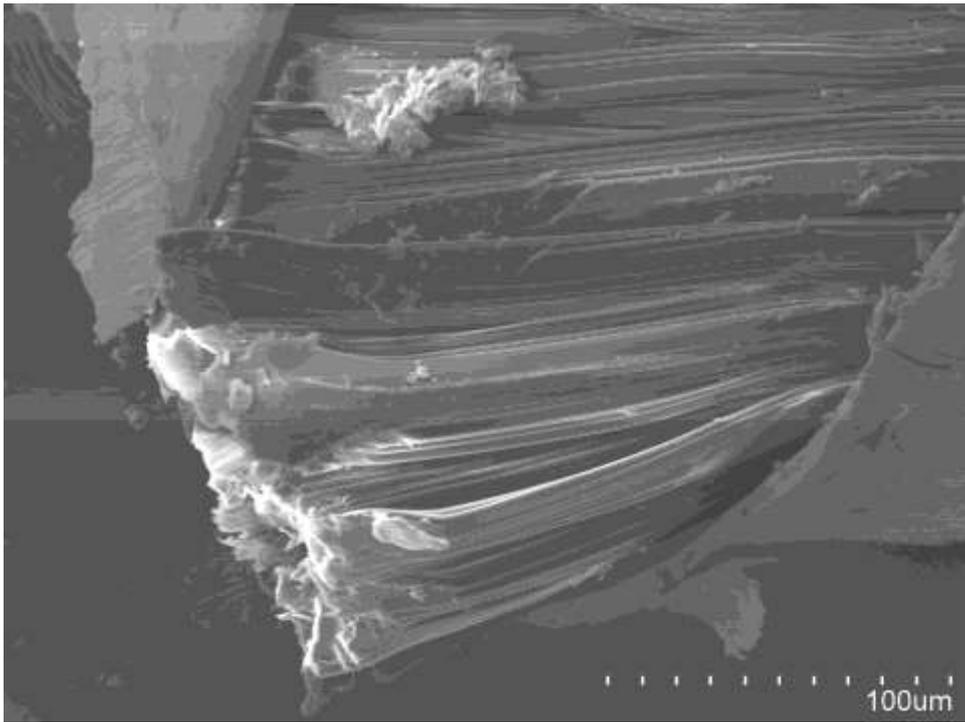


Fig. 18 (SEM) Silk Threads -Lab/6

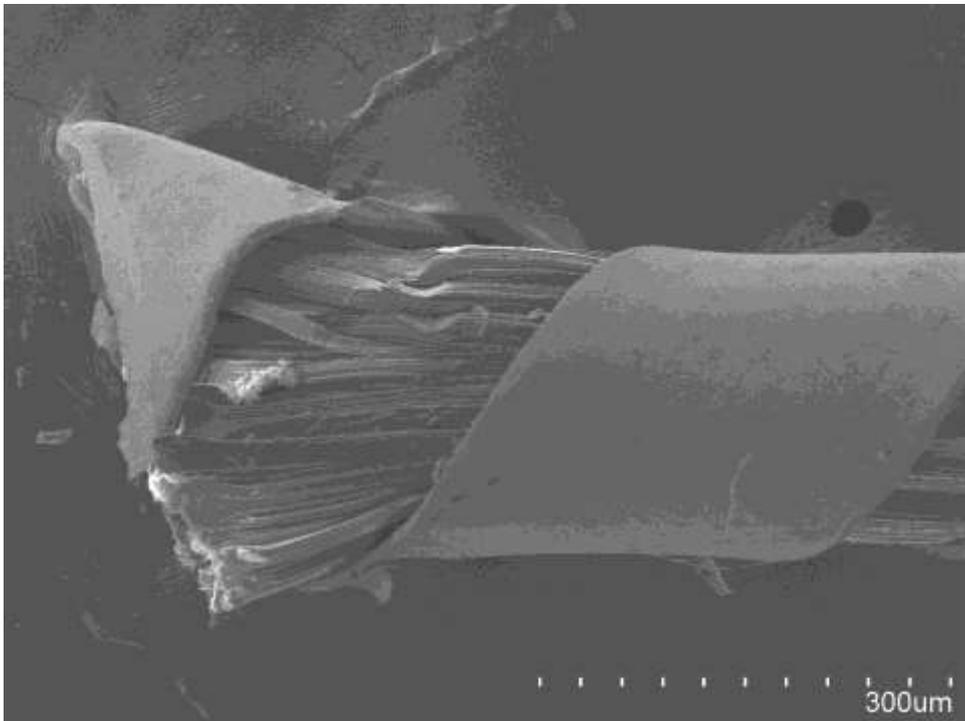


Fig. 19 (SEM) Silk Threads -Lab/6



Fig. 20 (SEM) Silk Threads -Lab/6

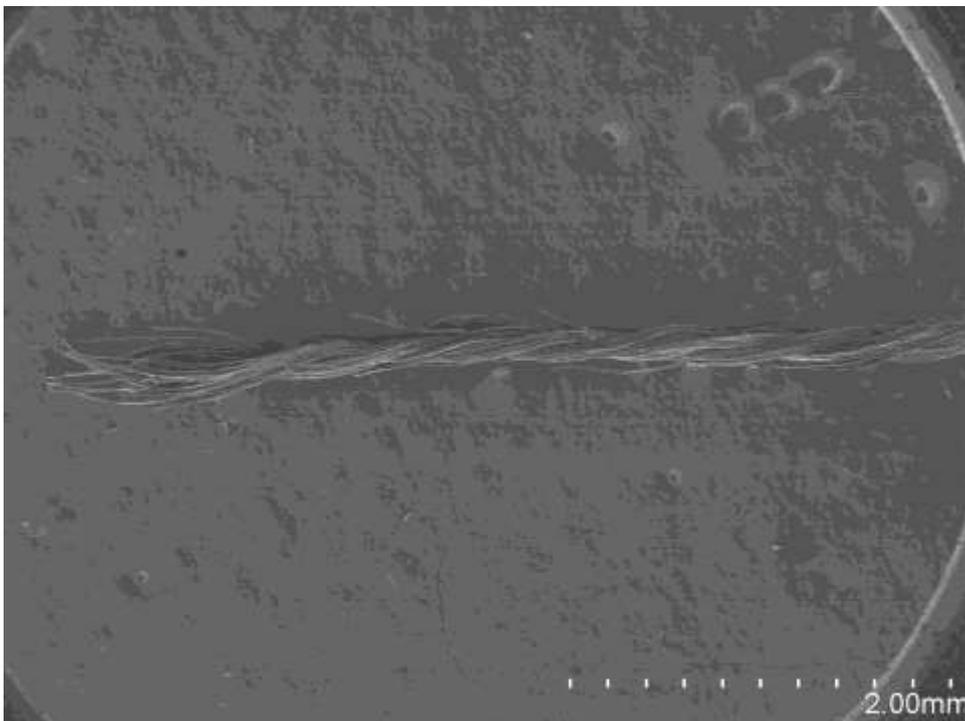


Fig. 21 (SEM) Silk Threads -Lab/2

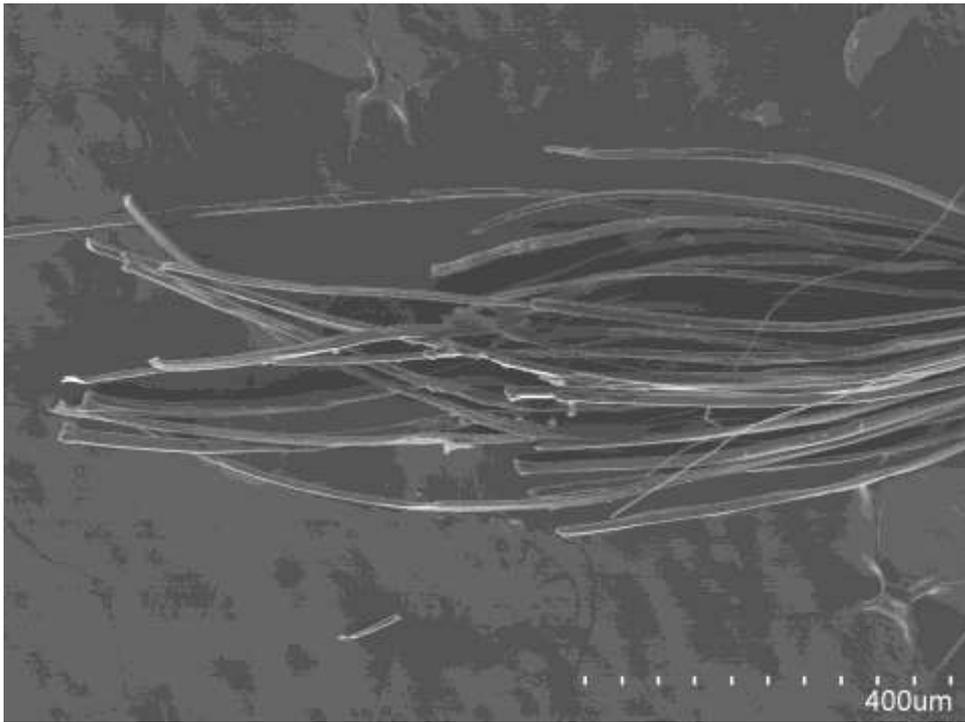


Fig. 22 (SEM) Silk Threads -Lab/2

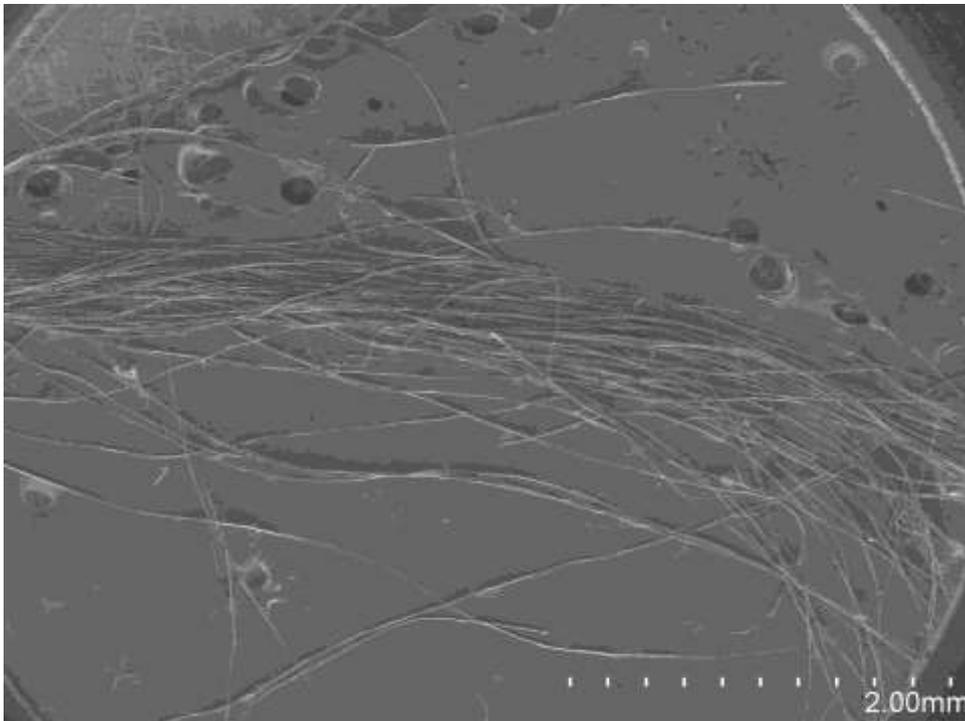


Fig. 23 (SEM) Silk Threads -Lab/2

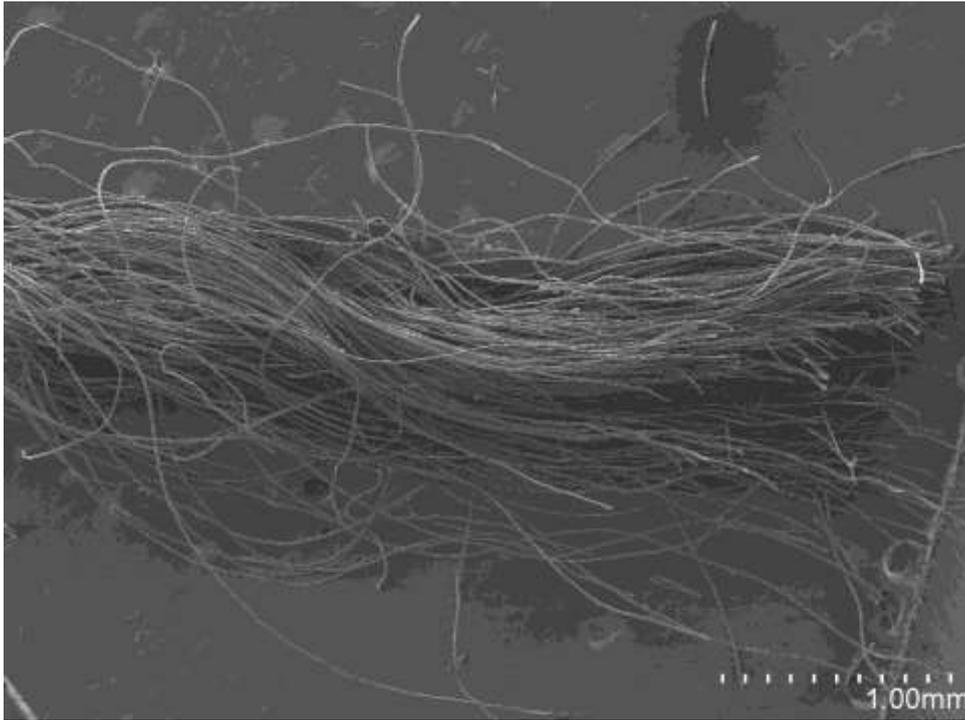


Fig. 24 (SEM) Silk Threads -Lab/3

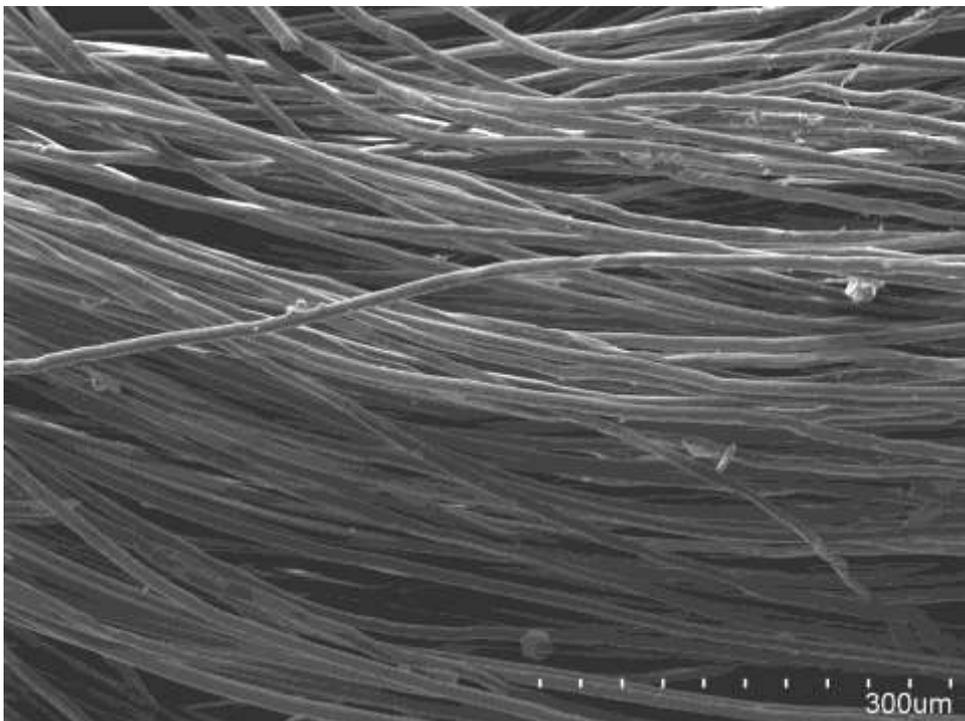


Fig. 25 (SEM) Silk Threads -Lab/3

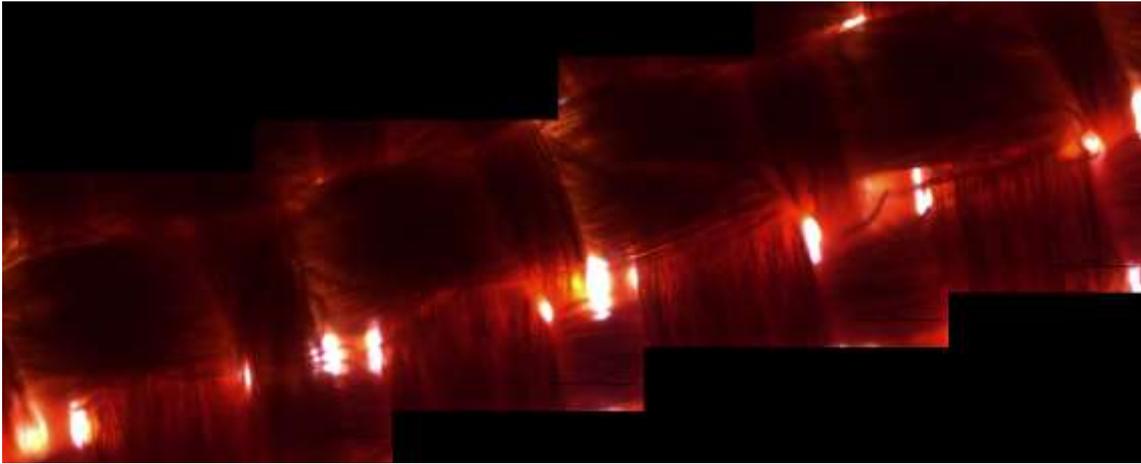


Fig. 26 (LMi) Silk Threads -Lab/1

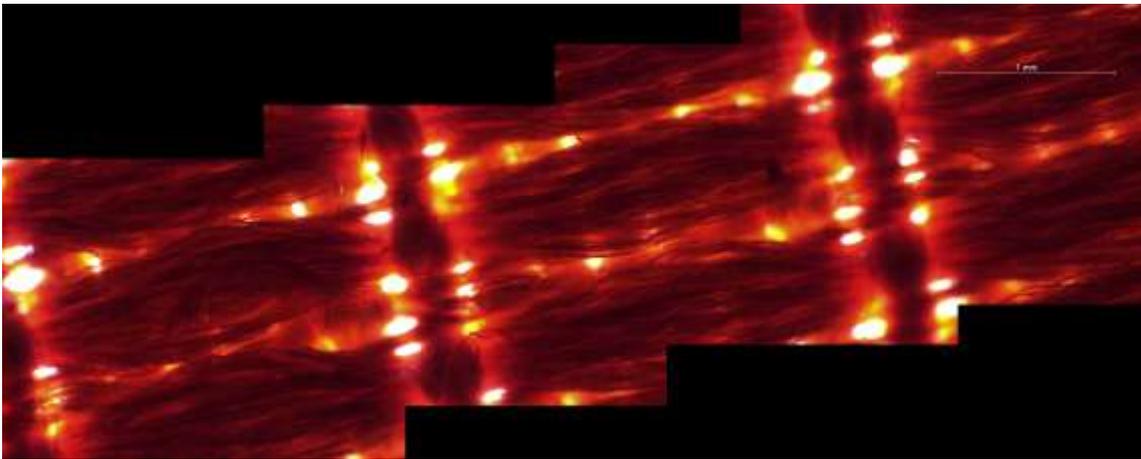


Fig. 27 (LMi) Silk Threads -Lab/1

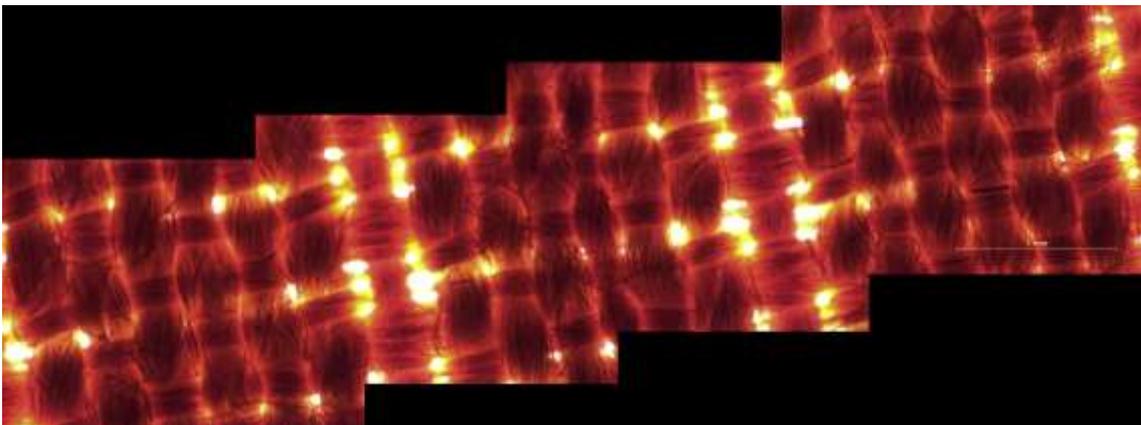


Fig.28 (LMi) Silk Threads -Lab/1



Fig. 29 (LMi) Silk Threads -Lab/1

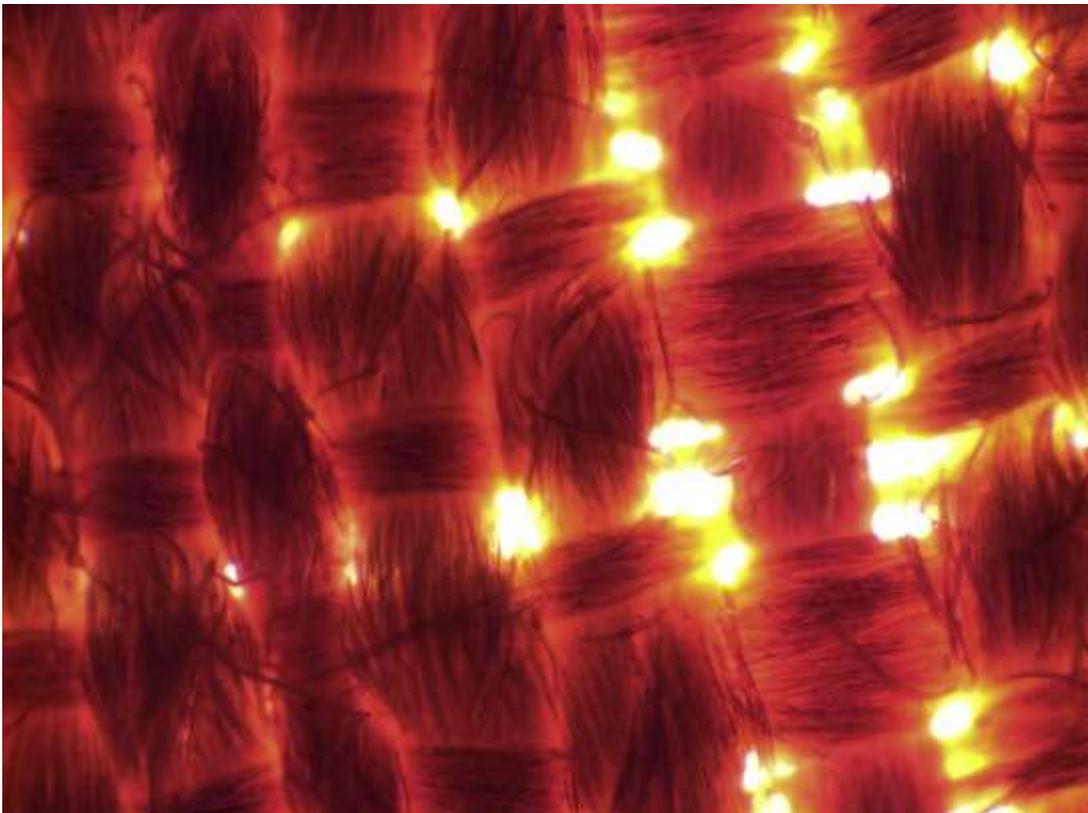


Fig. 30 (LMi) Silk Threads -Lab/1

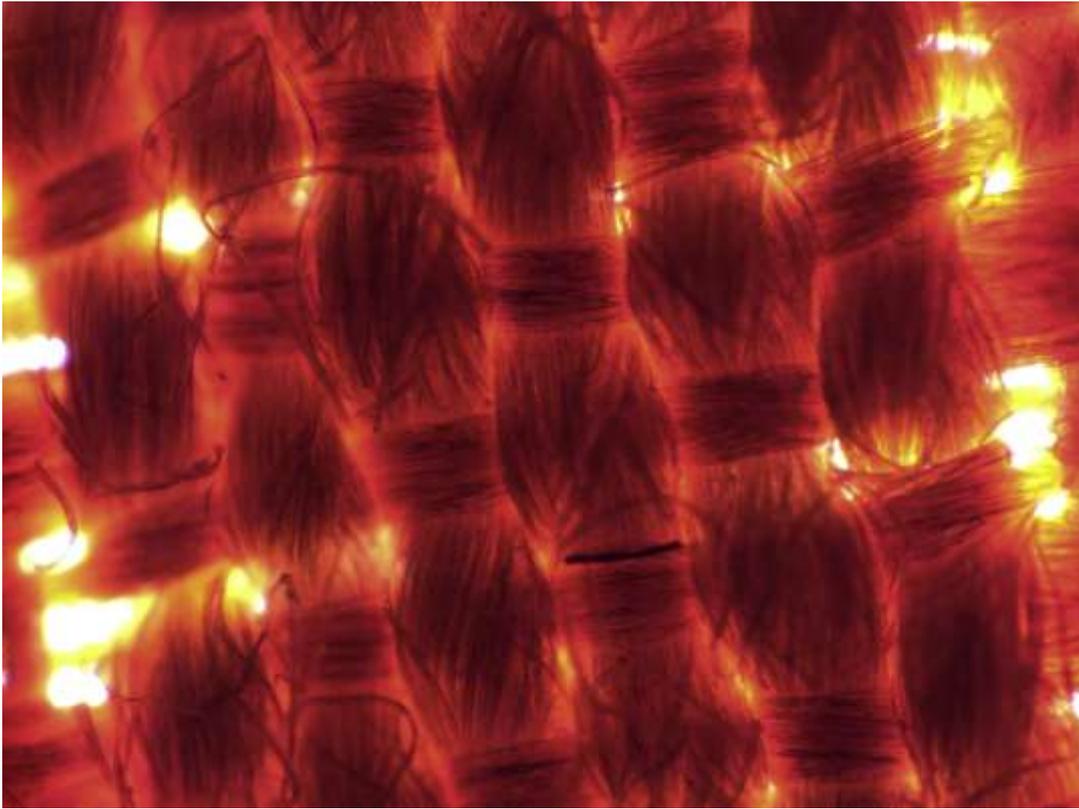


Fig. 31 (LMi) Silk Threads -Lab/2

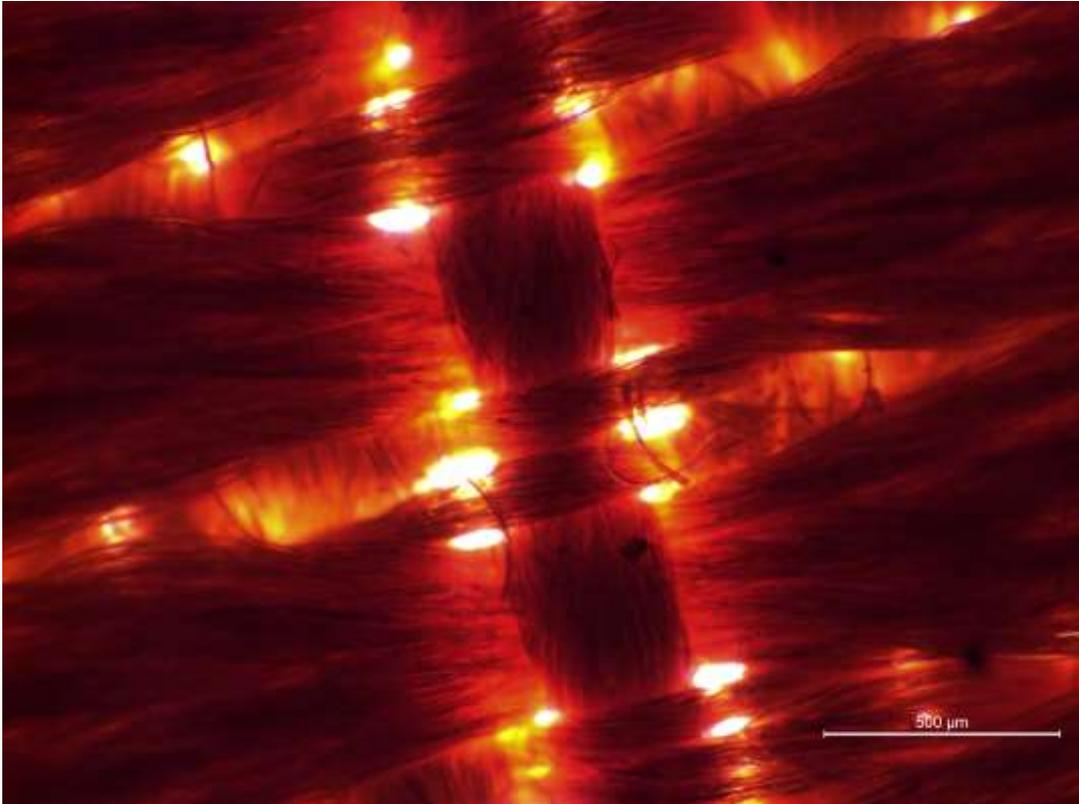


Fig. 32 (LMi) Silk Threads -Lab/2

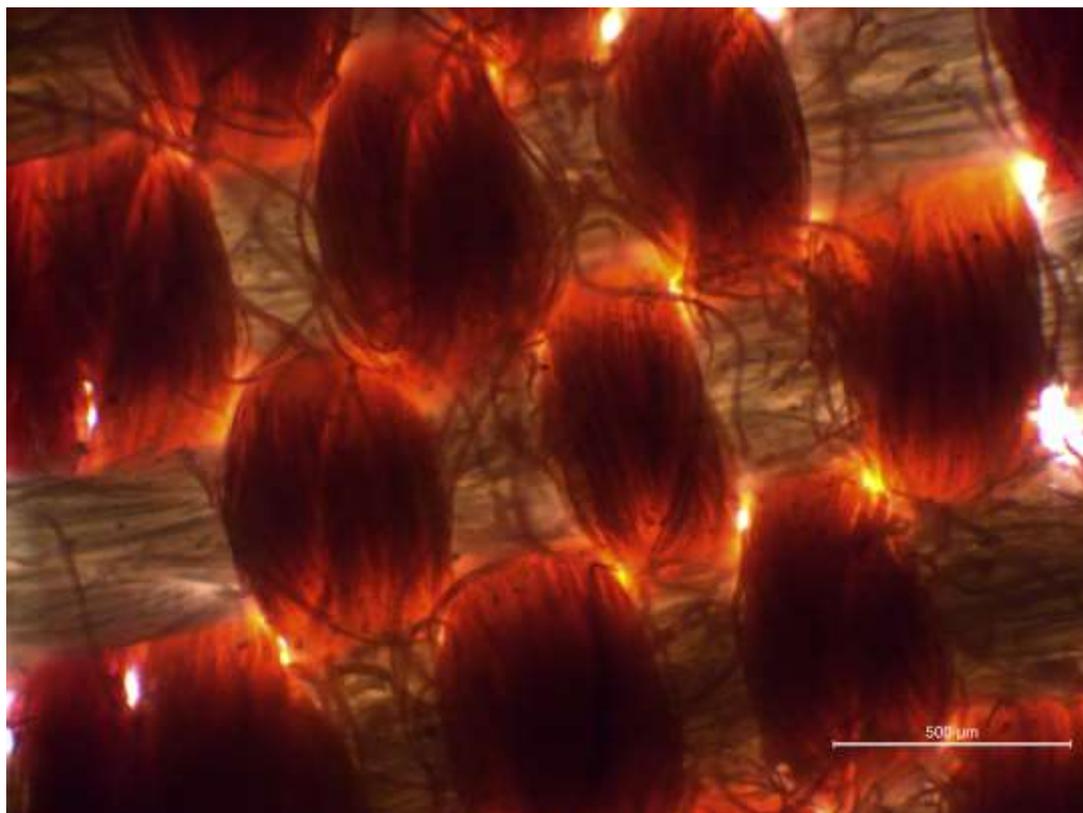


Fig. 33 (LMi) Silk Threads -Lab/3

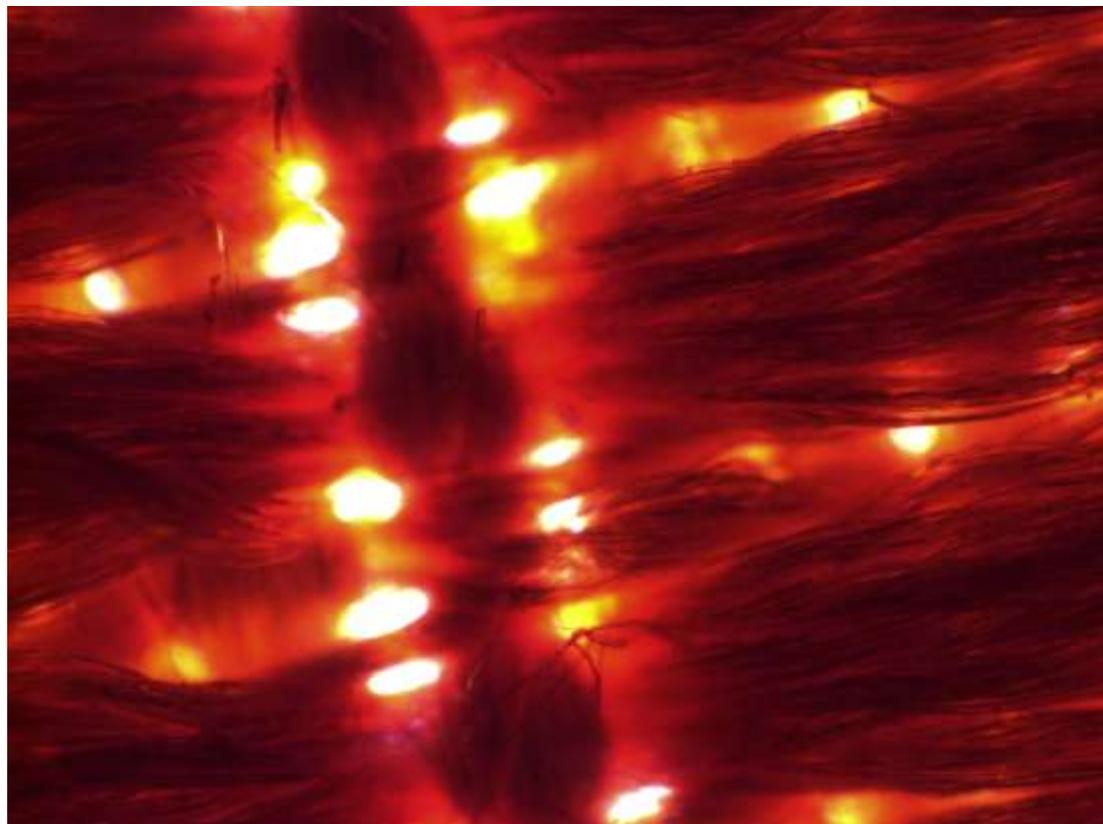


Fig. 34 (LMi) Silk Threads -Lab/3

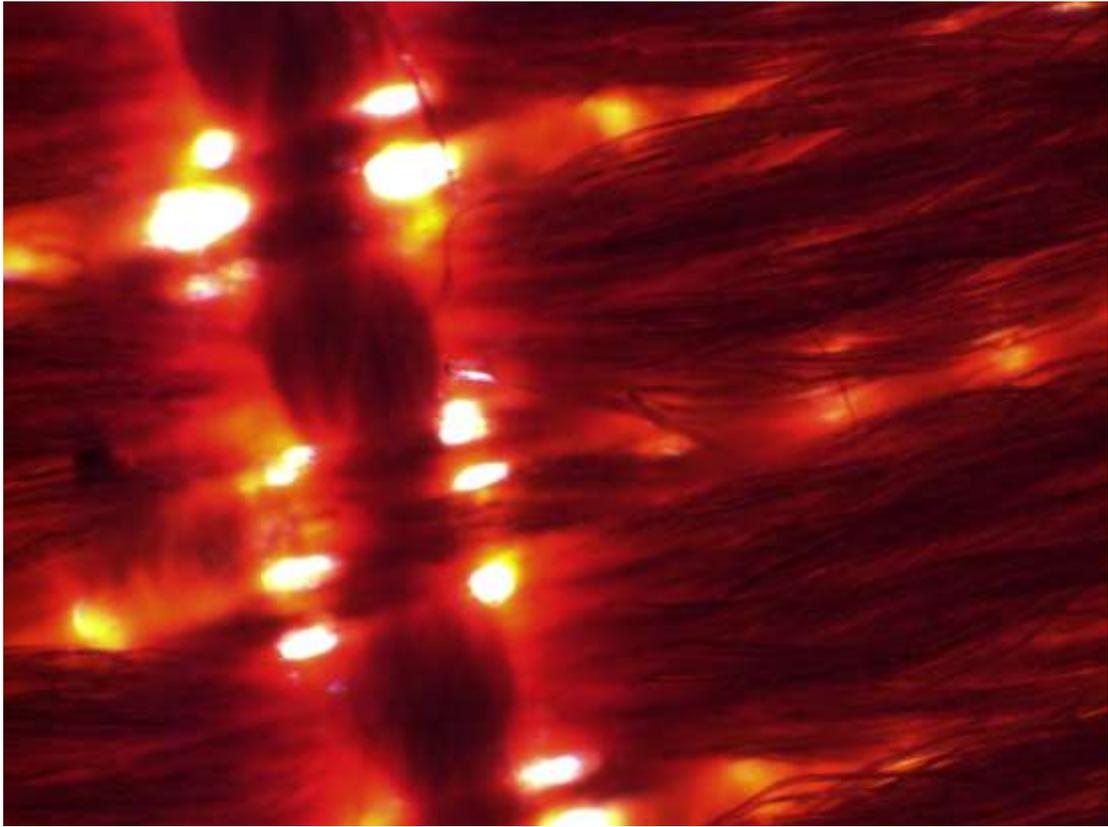


Fig. 35 (LMi) Silk Threads -Lab/3

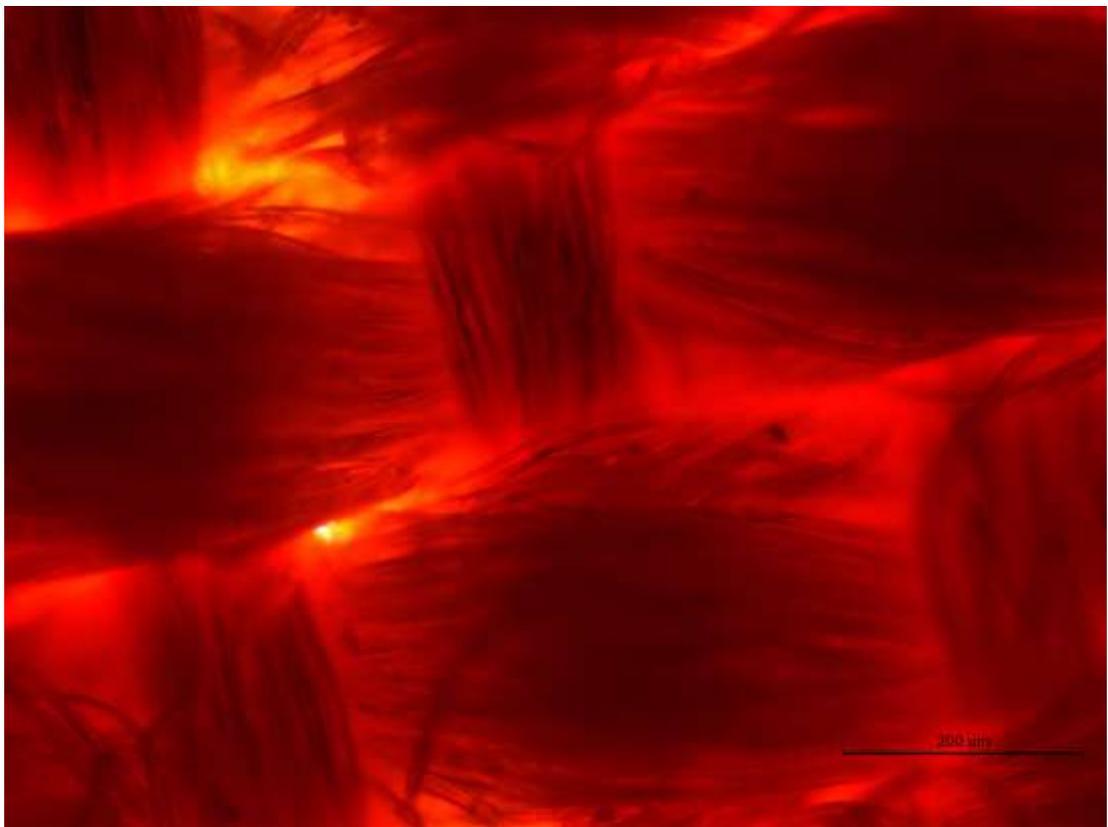


Fig. 36 (LMi) Silk Threads -Lab/3



Fig. 37 (LMi) Silk Threads -Lab/4

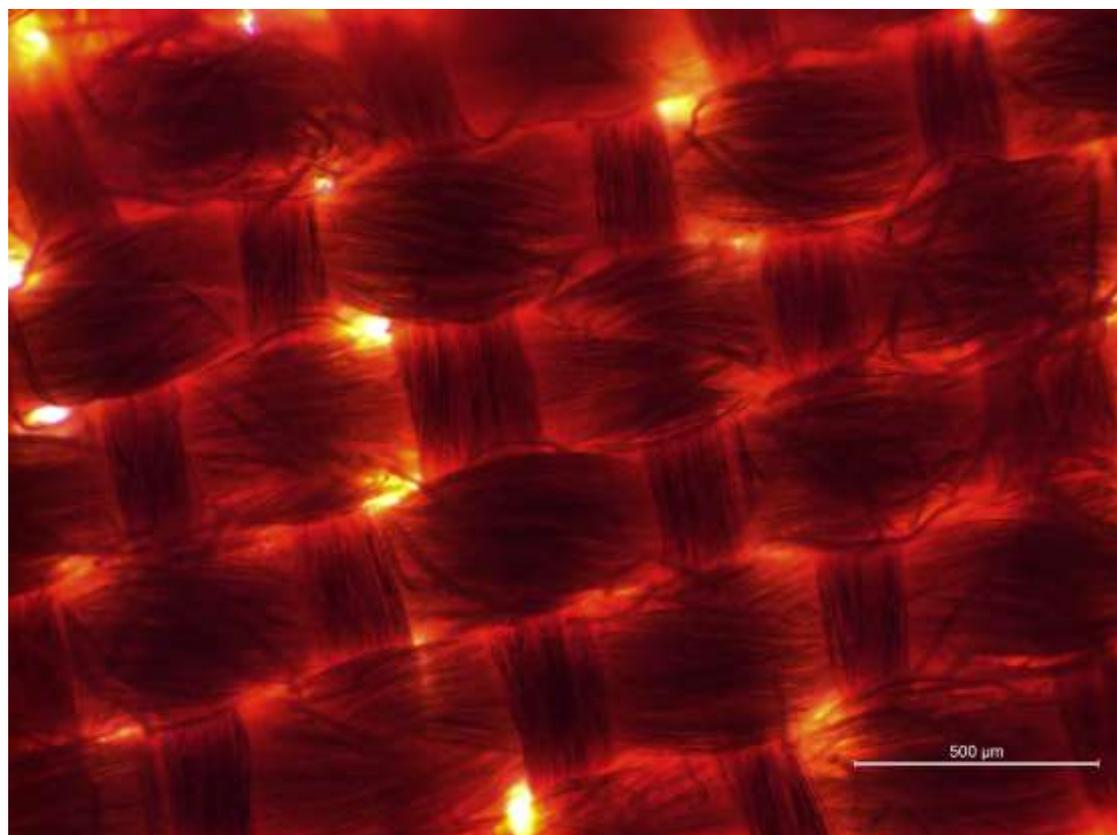


Fig. 38 (LMi) Silk Threads -Lab/4

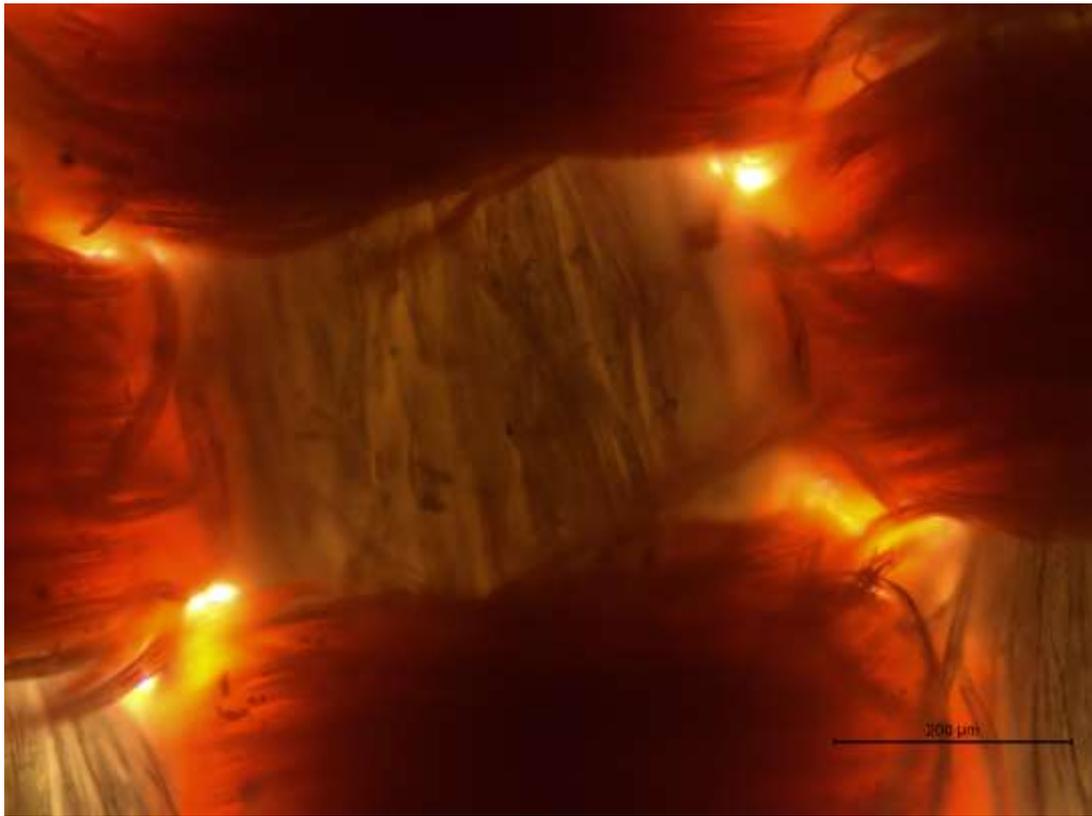


Fig. 39 (LMi) Silk Threads -Lab/5

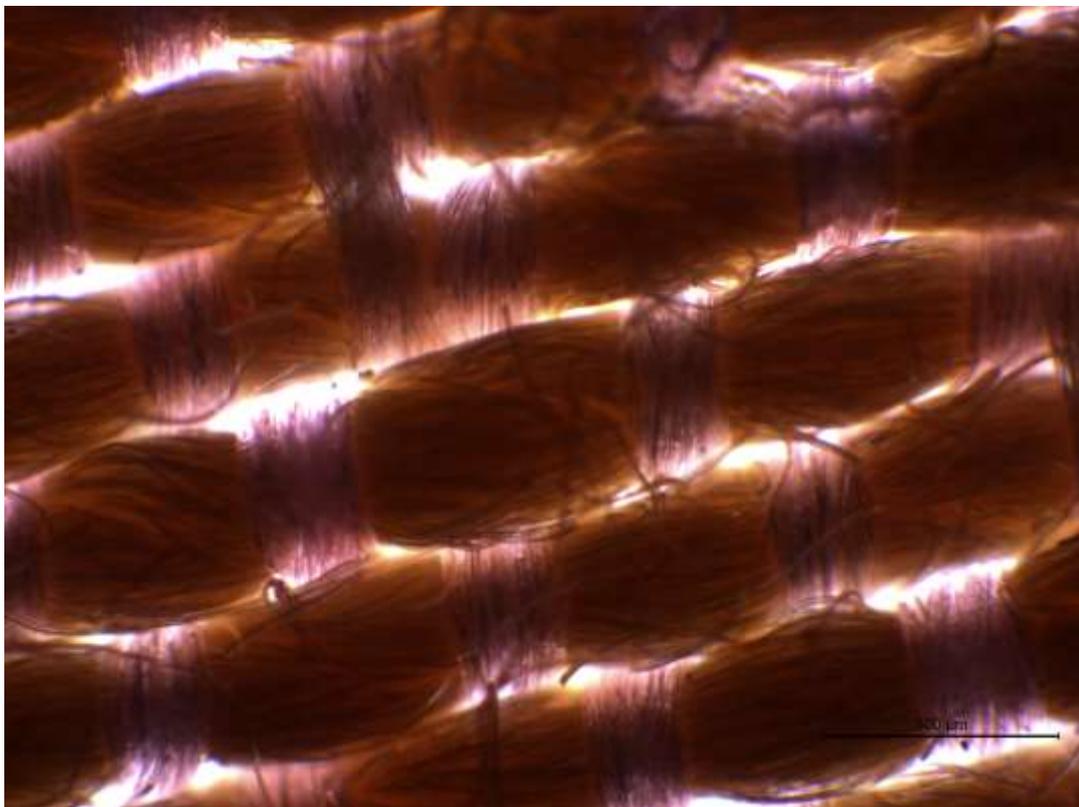


Fig. 40 (LMi) Silk Threads -Lab/5

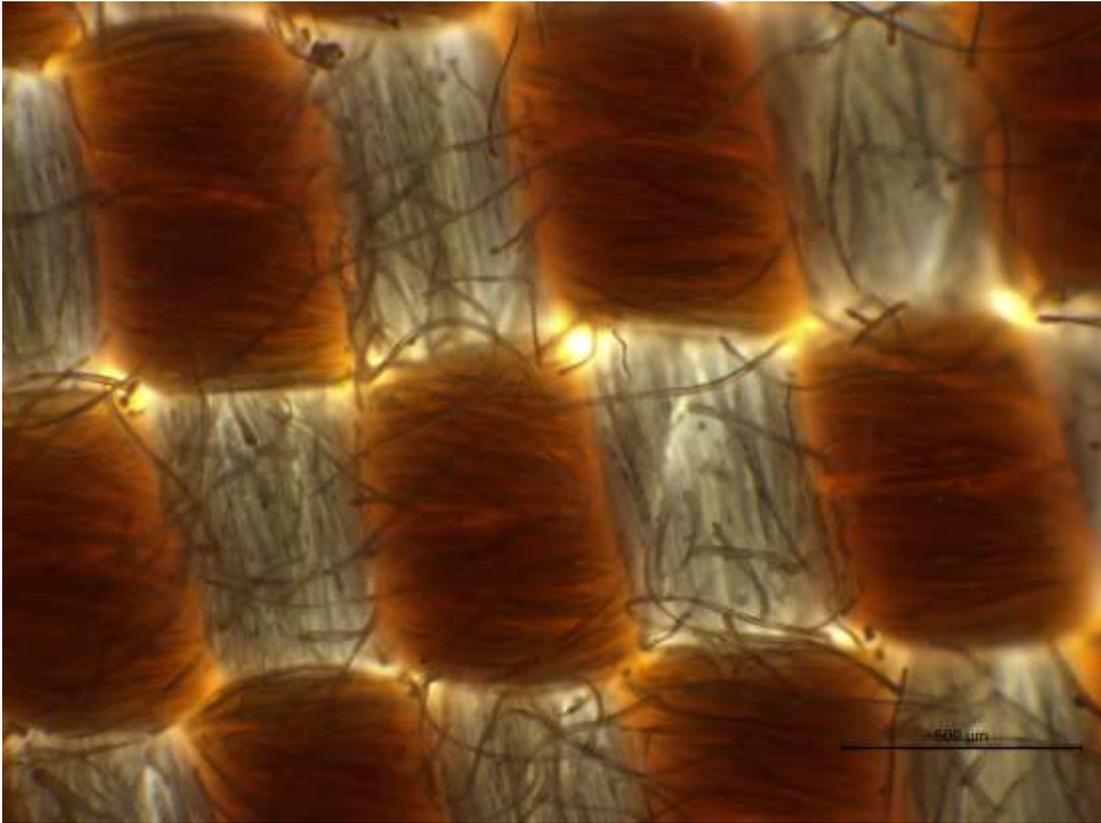


Fig. 41 (LMi) Silk Threads -Lab/5

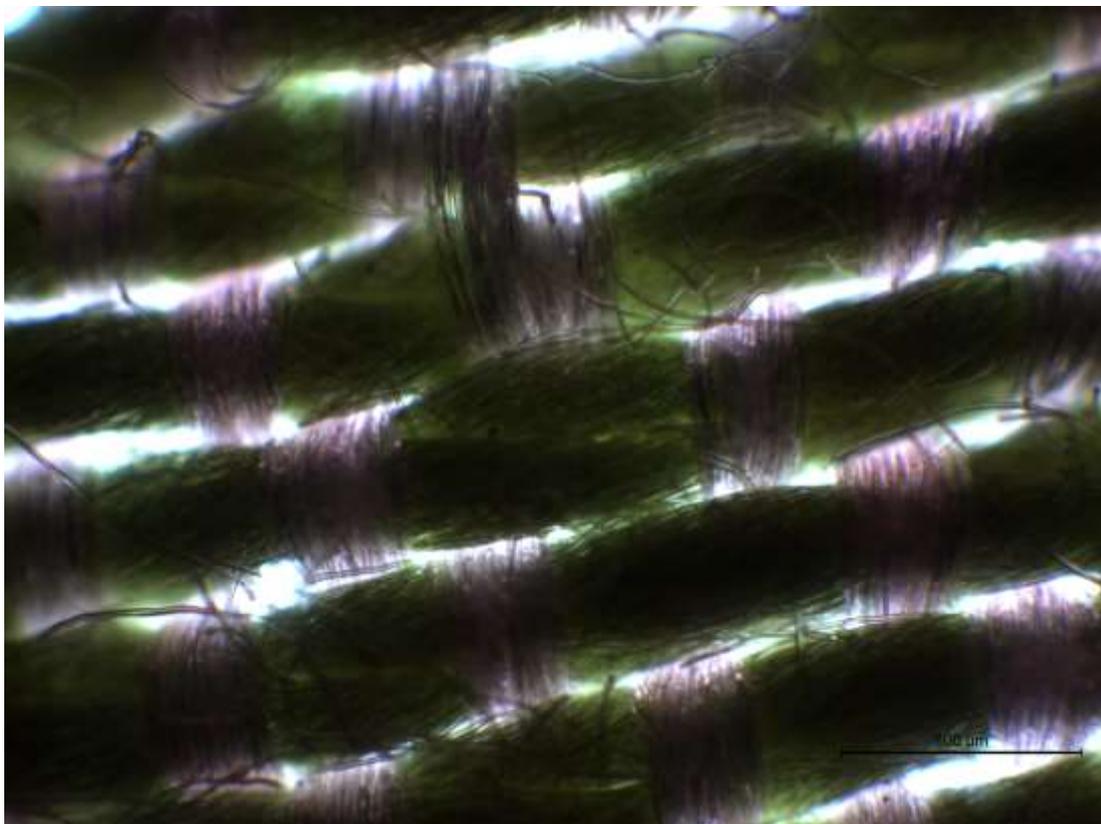


Fig. 42 (LMi) Silk Threads -Lab/2

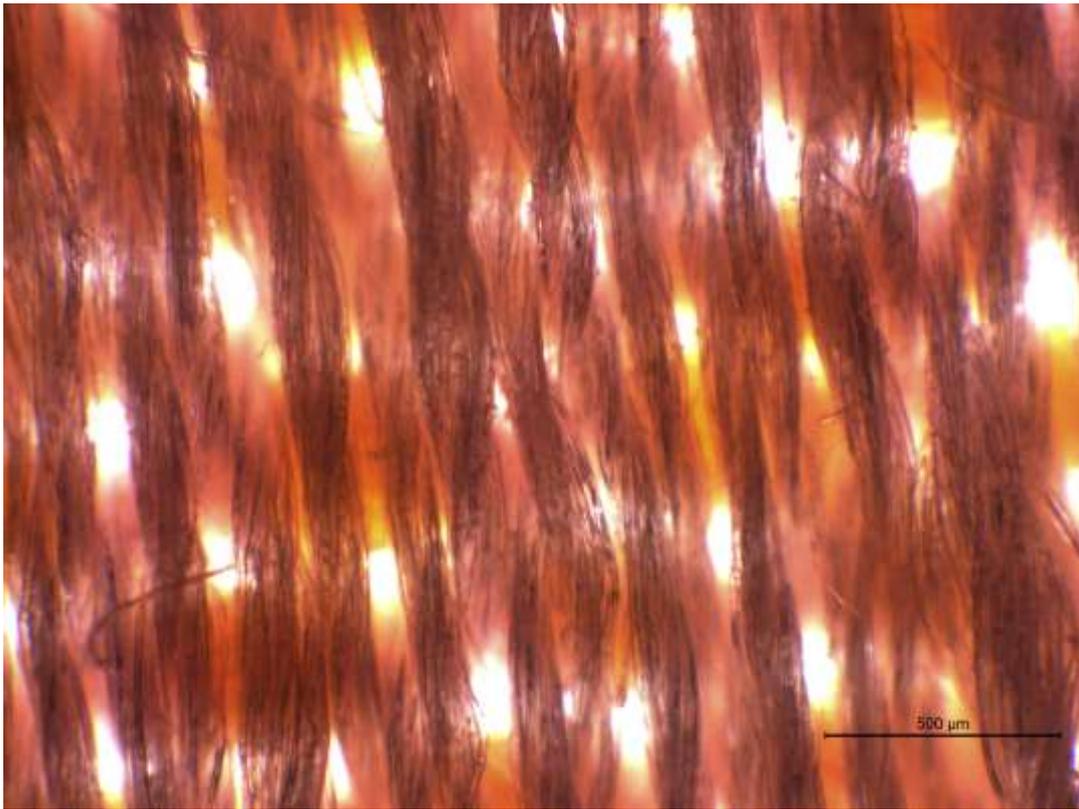


Fig. 43 (LMi) Silk Threads -Lab/6

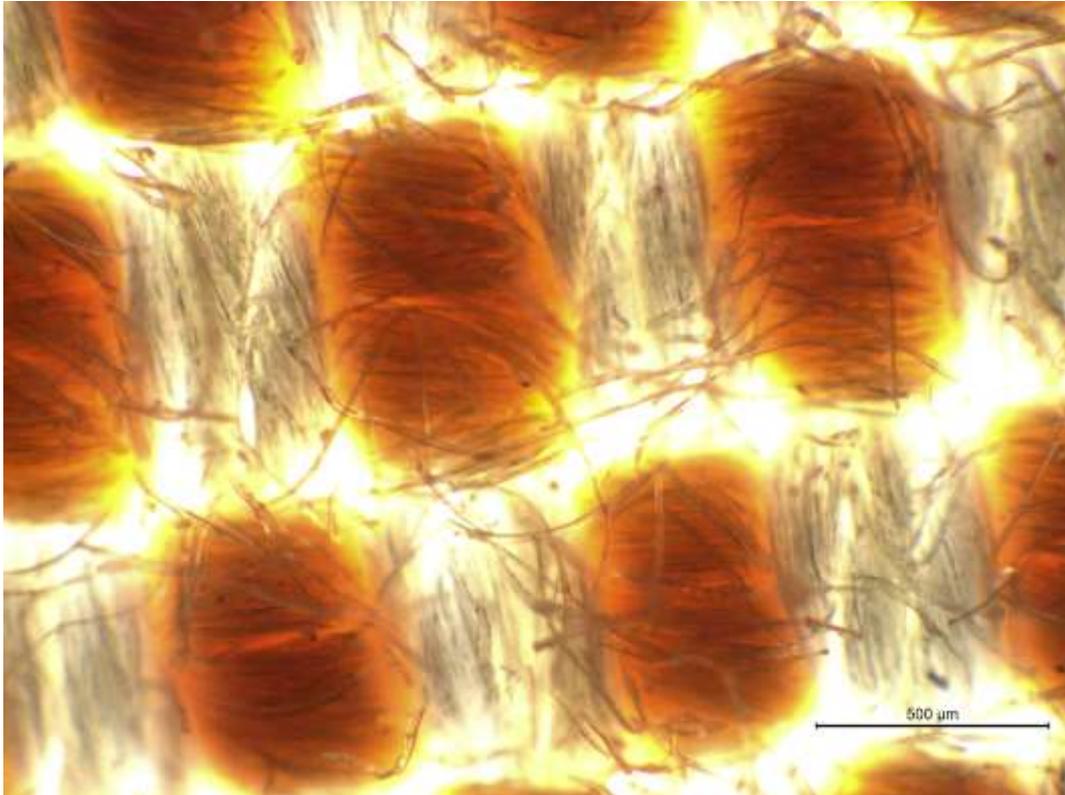


Fig. 44 (LMi) Silk Threads -Lab/5



Fig. 45 (LMi) Silk Threads -Lab/2

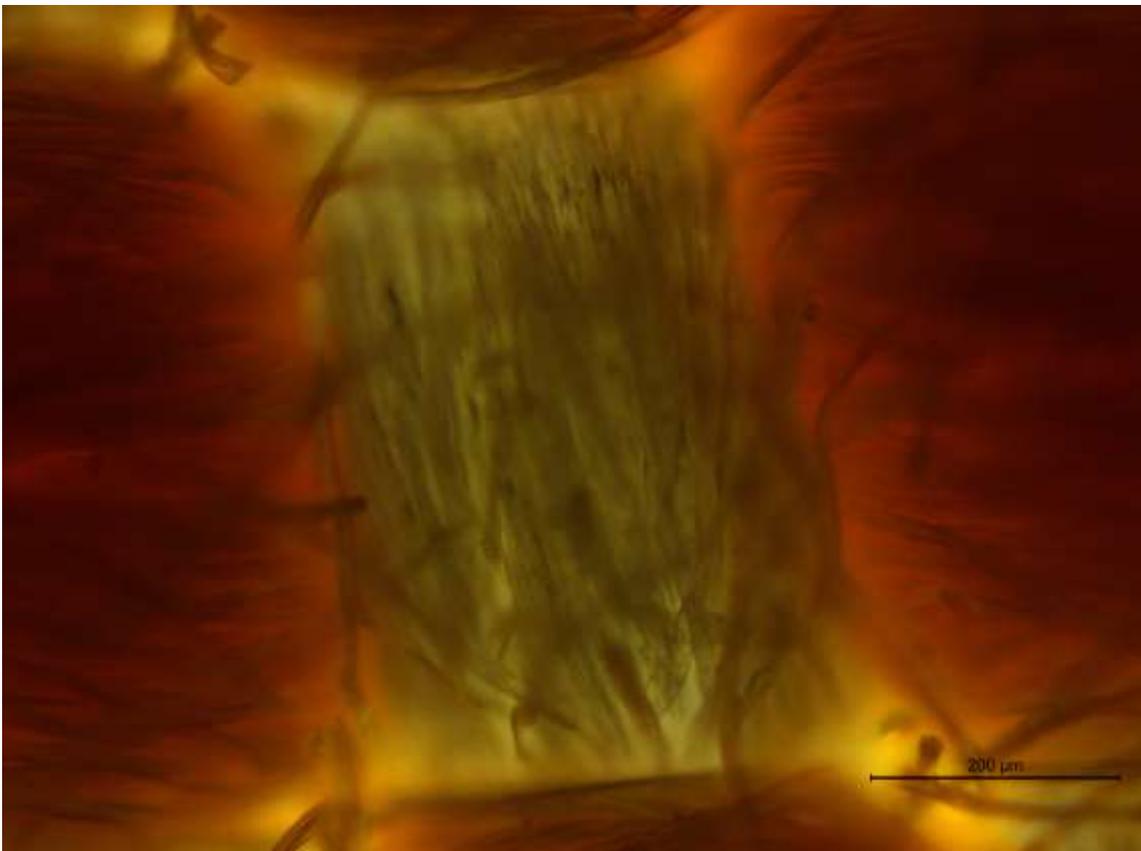


Fig. 46 (LMi) Silk Threads -Lab/5

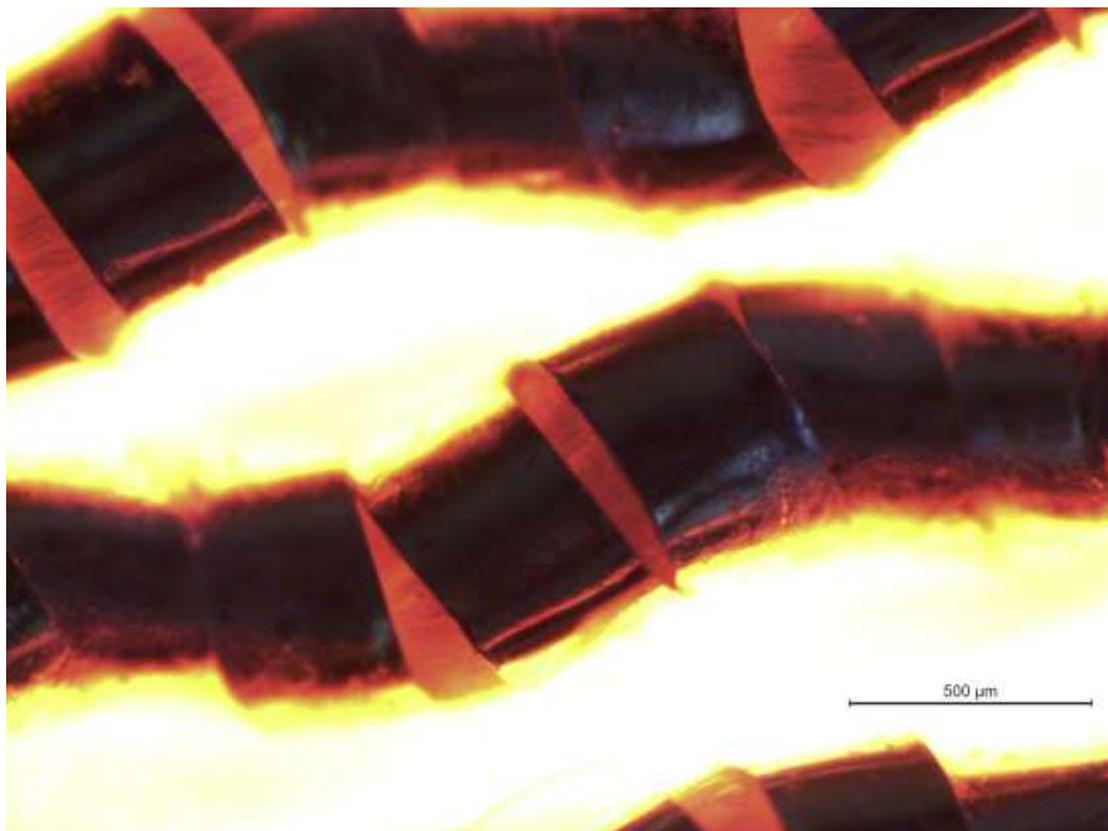


Fig. 47 (LMi) Silk Threads -Lab/6



Fig. 48 (LMi) Silk Threads -Lab/6

Annex 1

Description of the equipment used

1. *Optical Microscopy (LM)*. Microscope LEICA EZ4 ocul 10x. For image processing, the LAS EZ (Leica Application Suite) program has been used.
2. *Scanning Electron microscope-X-Ray Microanalysis (SEM-EDX)*. Hitachi S4800 Field Emission Cannon Sweep electron microscope (FEG) with a resolution of 1.4nm to 1kV. This unit has a backscattered detector, RX Bruker detector, transmitted detector. In addition, it has the QUANTAX 400 program to do microanalysis and has five motorized axles
3. *Leica DMI 3000 research inverted microscope (LMi)*, with long-lasting phase fluorescence and contrast with 2000-hour halide illuminator and fiber optic transmission. Filters for Dapi, Fluorescein and Rodamina. Objectives: 10x, 20x, 40x and 63x. Image acquisition system with high resolution and high sensitivity digital camera.