

Polarization-sensitive Two-photon Microscopy for a Label-free Amyloid Structural Characterization

 Maciej Lipok¹, Patryk Obstarczyk¹, Joanna Olesiak-Bańska¹
¹Institute of Advanced Materials, Wrocław University of Science and Technology

Corresponding Author

Joanna Olesiak-Bańska

joanna.olesiak-banska@pwr.edu.pl

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jove.com/video/65670

Materials

| Name | Company | Catalog Number | Comments |
|---|---------------|----------------|---|
| Sample preparation | | | |
| Coverslips, 24 x 24 mm | Chemland | 04-298.202.04 | |
| DPX mountant for histology | Sigma-Aldrich | 6522 | Slide mountant |
| Eppendorf Safe-Lock tubes, 1.5 mL, polypropylene | Chemland | 02-63102 | |
| Eppendorf ThermoMixer C | Eppendorf | | Used for spherulite incubation |
| HLP 5UV Water purification system | Hydrolab | | Source of dionized water used in sample preparation |
| Hydrochloric acid (≥37%, APHA ≤10), | Sigma-Aldrich | 30721-M | |
| Insulin powder from the bovine pancreas (≥25 units/mg (HPLC)) | Sigma-Aldrich | I5500 | |
| Methanol (HPLC grade) | Sigma-Aldrich | 270474 | |
| Microscope slides with a concave, 76 x 26 x 1 mm | Chemland | 04-296.202.09 | |
| Olympus BX60 | Olympus | | Polarized Optical Microscope used in Figure 2 |
| PTFE thread seal tape, 12 mm x 12 mm x 0.1 mm, 60 gm ² | Chemland | VIT131097 | |
| Microscope ps-2PFM setup | | | |
| Chameleon Ultra II | Coherent | | |
| FELH0800 - Ø25.0 mm Longpass Filter | Thorlabs | | |
| FESH0700 - Ø25.0 mm Shortpass Filter | Thorlabs | | |
| IDQ100 photon-counting avalanche photodiodes | ID Quantique | | |
| Multiphoton short-pass emission filter 720 nm | Semrock | | |
| Mounted Achromatic Half-Wave Plate, 690-1200 nm | Thorlabs | | |

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|---|----------------------|--|------------------|
| Nikon Plan Apo Oil Immersion 100x/1.4 NA | Nikon | | |
| piezo 3D stage | Piezosystem Jena | | |
| Polarizing Beamsplitter | Thorlabs | | |
| S130C - Slim Photodiode Power Sensor, Si, 400 - 1100 nm, 500 mW | Thorlabs | | |
| Software | | | |
| LabView 2018 | National Instruments | | Version 18.0.1f2 |
| Matplotlib library | | | Version 3.3.2 |
| NumPy library | | | Version 1.19.2 |
| SciPy library | | | Version 1.5.2 |
| Spyder Python 3 IDE | | | Version 4.1.5 |