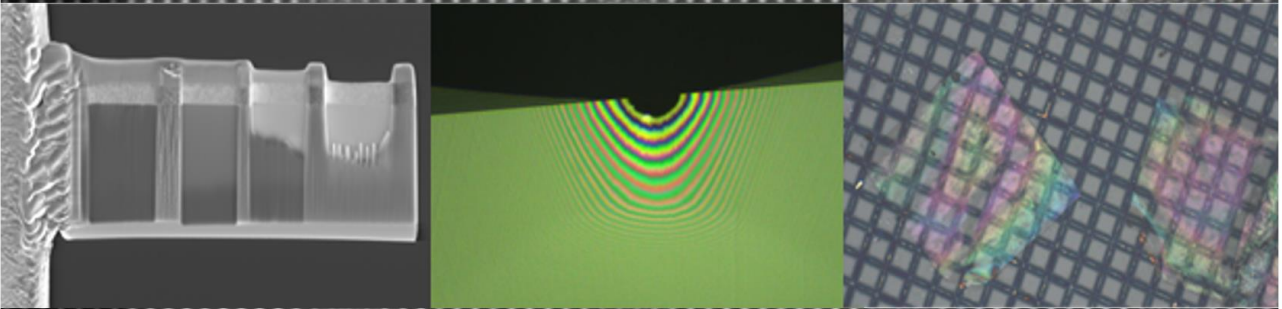




# Workshop on Advanced TEM Specimen Preparation



Stuttgart, October 24<sup>th</sup> - 28<sup>th</sup>, 2022  
Max Planck Institute for Solid State Research



ESTEEM3 has received funding from the European Union's **Horizon 2020** research and innovation programme under grant agreement No 823717.



**ESTEEM3** – Enabling Science and Technology through European Electron Microscopy – is an EU funded project for electron microscopy, which aims at providing access to the leading European state-of-the-art electron microscopy research infrastructures, facilitating and extending transnational access services of the most powerful atomic scale characterization techniques in advanced electron microscopy research to a wide range of academic and industrial research communities for the analysis and engineering of novel materials in physical, chemical and biological sciences.

Website to ESTEEM3: <https://www.esteem3.eu/>



## Workshop

The workshop on **Advanced TEM Specimen Preparation** will present a selection of advanced techniques for the preparation of TEM samples. It includes lectures, equipment demonstrations as well as practical hands-on laboratory work for the participants under the guidance of staff members of the Stuttgart Center for Electron Microscopy, demonstrating the following methods:

- Ultramicrotomy (UM)
- Focused Ion Beam (FIB)
- Ion Milling (IM)
- Automated Tripod Polishing (Tripod)
- Metallographic Pre-preparation (MP)

## Location

The workshop will take place from October 24<sup>th</sup> to October 28<sup>th</sup>, 2022 at the Stuttgart Center for Electron Microscopy (**StEM**) of the Max Planck Institute for Solid State Research  
Heisenbergstrasse 1

70569 Stuttgart, Germany

<https://www.fkf.mpg.de/StEM>

How to find us: <https://www.fkf.mpg.de/30703/40> [How to find us](#)

## Workshop language

English

## Registration

In order to register, please complete and send your registration form by email to the workshop organizing committee ([sample.preparation@fkf.mpg.de](mailto:sample.preparation@fkf.mpg.de)) before September 30<sup>th</sup>, 2022. A confirmation will be sent per email to all participants in due time. Please note that the number of participants is limited to 15.

## Workshop fees

The workshop fees are € 200. These include attendance of lectures, laboratories, consumables for specimen preparation, welcome reception, lunches and dinner on October 26<sup>th</sup>, 2022. For ESTEEM members, the workshop is free of charge. Accommodation please see below.

## Bank account

Delegates should settle the workshop fees via bank transfer to:

Name: Max-Planck-Gesellschaft zFdw e.V./MPI FKF  
Reference: "ESTEEM3"  
Bank: Deutsche Bank, München  
Swift-Code (BIC): DEUTDEMMXXX  
IBAN: DE98 7007 0010 0195 1300 38

Bank transaction charges have to be covered by the participant.

## Accommodation

There is a call-off contingent at a special workshop rate in following hotel from October 24<sup>th</sup>, to October 28<sup>th</sup>, 2022:

| Hotel  | Price/Night | Available until                 | Code    |
|--|-------------|---------------------------------|---------|
| <b>Relaxa Waldhotel Schatten</b><br><a href="mailto:stuttgart@relaxa-hotel.de">stuttgart@relaxa-hotel.de</a><br>+49 711-6867-0<br><a href="http://www.relaxa-hotel-stuttgart.de">www.relaxa-hotel-stuttgart.de</a> | € 80,00     | 10.10.2022                      | ESTEEM3 |
| <b>MPI Guesthouse</b><br>to be booked via<br>workshop office<br><a href="mailto:sample.preparation@fkf.mpg.de">sample.preparation@fkf.mpg.de</a>   | € 53,50     | <b>For ESTEEM members only!</b> |         |

Other hotels can be found using this link: <http://www.stuttgart-tourist.de/en>

## Deadlines

**September 30<sup>th</sup>, 2022**      Registration  
**October 10<sup>th</sup>, 2022**      Payment of the registration fee

## Organizing Committee and Contact

Max Planck Institute for Solid State Research  
Stuttgart Center for Electron Microscopy (StEM)  
Heisenbergstrasse 1  
70569 Stuttgart, Germany  
Phone: +49 711 689-3526  
Email: [sample.preparation@fkf.mpg.de](mailto:sample.preparation@fkf.mpg.de)

As we plan for a face-to-face event, please note that in order to be able to attend the workshop, you must provide an active proof of COVID-19 vaccination or recovery status ("2G rule").

## Program

**Monday, October 24<sup>th</sup>, 2022**

|                      | <b>Group 1</b>  | <b>Group 2</b> | <b>Group 3</b> | <b>Group 4</b> | <b>Group 5</b> |
|----------------------|---|----------------|----------------|----------------|----------------|
| <b>13.00 – 14.00</b> | Registration (Room 4D2)                                     |                |                |                |                |
| <b>14.00 – 15.30</b> | Opening and lecture: Introduction to TEM sample preparation |                |                |                |                |
| <b>16.00</b>         | Welcome reception   |                |                |                |                |

**Tuesday, October 25<sup>th</sup>, 2022**

|                      | <b>Group 1</b> | <b>Group 2</b> | <b>Group 3</b> | <b>Group 4</b> | <b>Group 5</b> |
|----------------------|----------------|----------------|----------------|----------------|----------------|
| <b>09.00 – 10.30</b> | UM             | FIB            | Tripod         | IM             | MP             |
| <b>10.30 – 11.00</b> | Coffee break   |                |                |                |                |
| <b>11.00 – 12.30</b> | UM             | FIB            | Tripod         | IM             | MP             |
| <b>12.30 – 13.30</b> | Lunch          |                |                |                |                |
| <b>13.30 – 15.00</b> | FIB            | Tripod         | IM             | MP             | UM             |
| <b>15.00 – 15.30</b> | Coffee break   |                |                |                |                |
| <b>15.30 – 17.00</b> | FIB            | Tripod         | IM             | MP             | UM             |

**Wednesday, October 26<sup>th</sup>, 2022**

|                      | <b>Group 1</b>                         | <b>Group 2</b> | <b>Group 3</b> | <b>Group 4</b> | <b>Group 5</b> |
|----------------------|--|----------------|----------------|----------------|----------------|
| <b>09.00 – 10.30</b> | Tripod                                 | IM             | MP             | UM             | FIB            |
| <b>10.30 – 11.00</b> | Coffee break                           |                |                |                |                |
| <b>11.00 – 12.30</b> | Tripod                                 | IM             | MP             | UM             | FIB            |
| <b>12.30 – 13.30</b> | Group Photo/Lunch                      |                |                |                |                |
| <b>13.30 – 15.00</b> | Equipment News: Update of Companies I  |                |                |                |                |
| <b>15.00 – 15.30</b> | Coffee break                           |                |                |                |                |
| <b>15.30 – 17.00</b> | Equipment News: Update of Companies II |                |                |                |                |
| <b>18.00</b>         | Workshop Dinner                        |                |                |                |                |

Ultramicrotomy (UM), Focused Ion Beam (FIB), Ion Milling (IM), Automated Tripod Polishing (Tripod), Metallographic Pre-preparation (MP)

**Thursday, October 27<sup>th</sup>, 2022**

|                      | <b>Group 1</b> | <b>Group 2</b> | <b>Group 3</b> | <b>Group 4</b> | <b>Group 5</b> |
|----------------------|----------------|----------------|----------------|----------------|----------------|
| <b>09.00 – 10.30</b> | IM             | MP             | UM             | FIB            | Tripod         |
| <b>10.30 – 11.00</b> | Coffee break   |                |                |                |                |
| <b>11.00 – 12.30</b> | IM             | MP             | UM             | FIB            | Tripod         |
| <b>12.30 – 13.30</b> | Lunch          |                |                |                |                |
| <b>13.30 – 15.00</b> | MP             | UM             | FIB            | Tripod         | IM             |
| <b>15.00 – 15.30</b> | Coffee break   |                |                |                |                |
| <b>15.30 – 17.00</b> | MP             | UM             | FIB            | Tripod         | IM             |

**Friday, October 28<sup>th</sup>, 2022**

|                      | <b>Group 1</b>                            | <b>Group 2</b> | <b>Group 3</b> | <b>Group 4</b> | <b>Group 5</b> |
|----------------------|---|----------------|----------------|----------------|----------------|
| <b>09.00 – 10.30</b> | Additional laboratory time / TEM lab tour |                |                |                |                |
| <b>10.30 – 11.00</b> | Coffee break                              |                |                |                |                |
| <b>11.00 – 12.00</b> | Additional laboratory time / TEM lab tour |                |                |                |                |
| <b>12.00 – 12.30</b> | Closing                                   |                |                |                |                |
| <b>12.30 – 13.30</b> | Lunch                                     |                |                |                |                |

Ultramicrotomy (UM), Focused Ion Beam (FIB), Ion Milling (IM), Automated Tripod Polishing (Tripod), Metallographic Pre-preparation (MP)

**Workshop on Advanced TEM Specimen Preparation**  
**Stuttgart, October 24<sup>th</sup> – October 28<sup>th</sup>, 2022**

## Registration form

(to be sent to [sample.preparation@fkf.mpg.de](mailto:sample.preparation@fkf.mpg.de))

|   |  |
|---|--|
| <b>Family Name</b>  |  |
| <b>First Name</b>   |  |
| <b>Title</b>  |  |
| <b>Company/Institute</b>  |  |
|   |  |
| <b>Street</b>   |  |
| <b>ZIP Code</b>   |  |
| <b>Country</b>  |  |
| <b>Phone</b>  |  |
| <b>Email</b>  |  |
| <b>esteem3 member</b>   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| <b>Reservation</b><br><b>MPI guest house</b><br><small>Please indicate nights/dates</small> |  |
| <b>Did you use any TEM sample preparation techniques?</b>                                   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| <b>If yes, which?</b>   |  |
| <b>Which materials?</b>   |  |