

COURSE PRESENTATION

Artworks and documents made of translucent or transparent supports are abundant in Archives, Libraries, and Museums collections. They include thin papers, tracing papers, films, thin skins etc. But these supports are generally delicate and fragile, and the related artworks and documents often have some structural issues, such as tears or delamination of the media. It becomes especially problematic when there becomes a need to handle these already fragile materials for consultation, digitization, or exhibition.

The field of nanotechnologies offers new possibilities to consolidate and to stabilize translucent and transparent supports with innovative materials. This course focuses on one kind of nanomaterials: the Nanocellulose gels and films, also known as Nanopapers.

Since 2018, the *Applications for Nanocellulose Gels & Films in Conservation* Workshop was done for the Conservation teams from some of the major institutions worldwide, such as **The British Museum, Harvard Library, the Museum of Fine Arts Boston, the Louvre Abu Dhabi or Tokyo National Research Institute for Cultural Properties**.

This two-day intensive course provides established conservators with a theoretical and practical foundation for understanding the use of the Nanocelluloses in conservation.



Making of a highly transparent Nanocellulose film in a Conservation lab, material then used for the consolidation treatments of Museum objects

Image Credits: Picasso Museum Paris / Dreyfuss-Deseigne

The course consists primarily of hands-on activities, but also includes lectures, group discussions, examination of various Nanocellulose films, the making processes of MFC films, CNC films and Nanocomposites, and the applications of these new materials (Nanopapers and Nanocellulose suspensions) on a selection of translucent and transparent supports.

DURING THE COURSE, THE PARTICIPANTS WILL:

- **Gain a complete understanding of Nanocellulose and its derivative materials**
- **Get the latest experimental data on the use of Nanocellulose in conservation**
- **Study and examine various samples of Nanocellulose films / Nanopapers**
- **Learn how to make different types of Nanopapers directly in a conservation lab**
- **Learn how to use Nanocellulose suspensions and Nanopapers for treatment**
- **Know where they can directly get these new materials**
- **Learn innovative methods to consolidate translucent and transparent supports**



Workshop with theoretical and practical parts



Making of highly transparent Nanopapers for mending treatments



Adhesive-free consolidation treatments using Nanocellulose Gels



Applications of Nanocellulose Gels and Nanopapers to consolidate canvases and 3-D Objects - Image credits (bottom right): ©British Museum

PROGRAM

DAY 1

9:00 - 10:15	General presentation: Nanocelluloses in Art Conservation – Part 1
10:15 - 10:30	<i>Short break</i>
10:30 - 12:30	General presentation: Nanocelluloses in Art Conservation – Part 2 Question and Answer Session
12:30 - 13:30	<i>Lunch Break</i>
13:30 - 15:00	Presentation: The three methods to make Nanocellulose films <ul style="list-style-type: none">• Presentation of a selections of handmade films• Making process of Nanocellulose films
15:00 - 15:15	<i>Short break</i>
15:15 - 16:00	<ul style="list-style-type: none">• Making process of Nanocomposite films• Question and Answer Session

DAY 2

9:00 - 10:00	Presentation: Availability of Nanocellulose materials <ul style="list-style-type: none">• Observation of a selection industrial products
10:00 - 10:15	<i>Short break</i>
10:15 - 12:30	<u>3 Workstations</u> (morning: 2 rotations): <ul style="list-style-type: none">• Observation of Nanocellulose samples under microscopes• Adhesive-free consolidations using Nanocellulose suspensions• Adhesive-free consolidations using Cellulose Nanocrystals gel
12:30 - 13:30	<i>Lunch Break</i>
13:30 - 15:00	<ul style="list-style-type: none">• Last rotation• Applications of Nanocellulose films on a selection of translucent and transparent supports
15:00 - 15:15	<i>Short break</i>
15:15 - 16:00	<ul style="list-style-type: none">• Application of Nanocellulose films on translucent and transparent materials continues / The 3 workstations remain available• Question and Answer Session

WORKSHOP

Applications for Nanocellulose Gels and Films in Art Conservation

Available for:

- Book & Paper Conservators
- Paintings Conservators
- Photographs Conservators
- Textiles Conservators
- 3D-Objects Conservators

• Trainer: **Remy Dreyfuss-Deseigne**

Senior Paper Conservator • Researcher

Graduated from the INP Program in Book and Paper Conservation
(Paris, France) and from the École du Louvre

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Remy Dreyfuss-Deseigne



Nanocellulose Workshop at Tokyo Tobunken in 2022 & 2023