Restauratoren NEDERLAND

# 18-22 NOVEMBER 2024 WORKSHOP

# HYDROGELS IN CONSERVATION

**Restauratoren Nederland proudly presents: Hydrogels in Conservation. A three-day workshop with Matthew Cushman for conservators of any specialization.**

## Practical information

**Dates:**

Online lecture:
18th of November 2024 9:00-17:00

Practical session 1:
19-20 November 2024 9:00-17:00

Practical session 2:
21-22 November 2024 9:00-17:00

**Language of instruction:** English

**Registration fee:**

SAVE THE DATE! Registration opens on September 1st, 2024, more info follows

Online lecture, (accessible for all): **€30**

Full workshop session 1 or 2 (RN members only), lunch included: **€200,00**

**Location:**

CollectieCentrum Nederland, Amersfoort

**Number of participants:**

40 (Max. 20 per practical session)

## About the workshop

This three-day workshop provides a comparative survey of several gel systems, including the introduction of some new biopolymer hydrogels for use in treatment. Participants will learn how gel structures relate to working properties and how gel selection and preparation can be matched to treatment needs. The workshop consists of:

- One full day of online lectures and a question/answer session
- Two days of hands-on, in-person practical sessions

This workshop is appropriate for conservator-restorers and students of any specialization. Participants in the full workshop will attend the online lecture day and one two-day in person practical. Materials will be provided, but participants are encouraged to bring test surfaces such as samples and objects with them.

## Meet Matthew Cushman

Matthew Cushman is the (George F. & Sybil H. Fuller Foundation) Conservator in Charge at the Worcester Art Museum (Worcester, Massachusetts, USA), where he leads the conservation department and oversees the care of the Museum's collection of nearly 40,000 works of art from around the world. Previously, Matt was the Conservator of Paintings at Winterthur Museum, Garden & Library as well as Affiliated Assistant Professor at the Winterthur/University of Delaware Program in Art Conservation, an affiliation he retains.

In addition to his museum work, Matt provides consultation services for the treatment of paintings and decorative surfaces, and he presents lectures and workshops internationally on the topics related to the cleaning of cultural heritage surfaces.

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## Detailed programme

### Day 1: Online Lecture

Introduction

- Gel techniques & control
- Polymer structures, junction types, and gel properties
- Biopolymer diversity and variability

Gel materials

- Thickeners & rheology modifiers
  - Cellulose ethers
  - Xanthan gum
  - Pemulen TR-2
- Rigid hydrogels
  - Agar & agarose
  - Gellan gum
- Thinking about crosslinking
  - Alginate gels
  - Poly(vinyl alcohol)-Borax
- Nanorestore® Gels:
  - Nanorestore Gels Dry
  - Nanorestore Gels Peggy
- New biopolymer hydrogels
  - Xanthan/Konjac-Agar
  - Curdlan hydrogels

Practical tips and tricks

- Tools and equipment
- Preparation tips: heating and casting
- Application methods: cast gels, fragmented gels, in-situ casting, creating gel tools
- Incorporating aqueous chemistry & solvents: methods and limitations
- Gel storage
- Residues and clearance

### Day 2: Hands-On

- Gel preparation demonstrations
- Comparative moisture delivery experimentation
- Delivery techniques
  - Cast gels, fragmented gels, in-situ casting techniques, mechanical tool casting

### Day 3: Hands-On

- Incorporating aqueous chemistry (pH/buffers, conductivity, chelating agents, etc.)
- Incorporating solvents
- Working on test surfaces