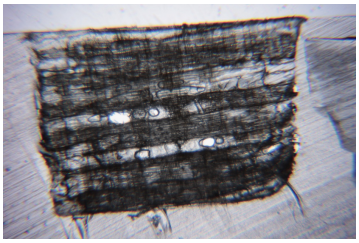
Hornemann Institute News 1/2025

Dear friends of cultural heritage,

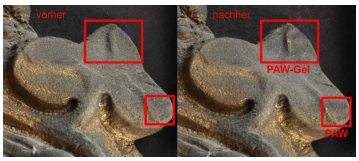
Today we would like to inform you about our current projects.

E-Publishing



University Papers

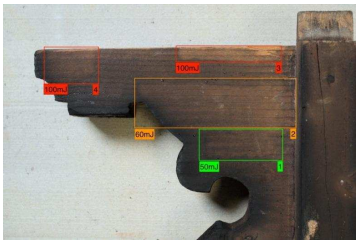
Johanna Blome:
Entwicklung einer Präparationsmethode für die Holzartenbestimmung an Kleinstproben (*Development of a Preparation Method for Wood Species Identification on Small Samples)*
The preparation of very small wood samples for wood species identification poses particular challenges due to their minimal size. The aim of this bachelor´s thesis is to develop a suitable method for embedding poplar wood samples of just a few millimeters in diameter in Technovit® 7100 and processing them subsequently by microtomy. The study systematically examines how modifications such as the use of vacuum affect the degassing and infiltration of the samples, and which block size, shape and sectioning technique offer the best results for reproducible thin sections. Additional aspects include the pre-wetting of samples and the influence of temperature during preparation.
Bachelor's thesis, HAWK, 2025, DOI: 10.5165/hawk/549
Photo: Johanna Blome



Nicolas Hannay:
Versuche zur Entfernung von Oxidschichten auf Messingoberflächen mit plasmaaktiviertem Wasser *(Experiments on removing oxide layers on brass using plasma-activated water)*

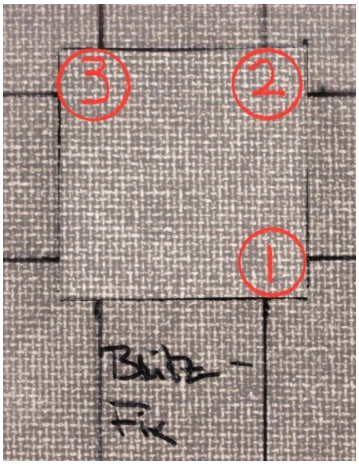
The removal of oxide layers from metals in restoration often presents both technical and ethical dilemmas. Therefore, this master´s thesis investigated the potential of plasma-activated water (PAW) for removing oxide layers from brass surfaces. The aim was to evaluate the cleaning effect on artificially aged samples and historical objects. Furthermore, comprehensive investigations of PAW´s pH value were carried out, and possibilities for producing plasma-activated hydrogels (PAH) were explored to enable more targeted application.
PAW treatments resulted in a high gloss and brightening of the surfaces, which was interpreted as the removal of dull, overlying oxide layers. However, the original tone of the brass could not be achieved in any case.
Master's thesis, HAWK, 2025, DOI: 10.5165/hawk/551

Photo: Nicolas Hanay



Anton Waldt:
Möglichkeiten der Reinigung rußgeschädigter Lackoberflächen auf Holz *(Possibilities for cleaning soot-damaged varnished surfaces on Wood)*
Fires are capable of causing hard-to-remove layers of soot on historic varnish surfaces on wooden objects, presenting restorers with object-specific challenges. Within this context, this study compares nine different cleaning media, including dry and wet cleaning media, as well as Nd:YAG laser cleaning. The aim was to use tests to determine which method and under which circumstances soot can be removed as effectively as possible while minimizing damage to the varnish surface.
Bachelor's thesis, HAWK, 2025

Photo: Anton Waldt



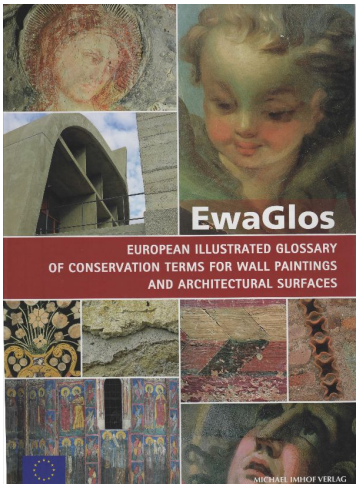
Julian Witthaut:
Möglichkeiten der Reinigungsevaluierung an Möbeloberflächen *(Possibilities for Cleaning Evaluation on Furniture Surfaces)*
This thesis investigates whether color and gloss measurements can be used as objective methods to evaluate the cleaning of furniture surfaces, how they might complement traditional visual assessment, and how much they may differ from it. For this purpose, two pieces of historical wood (one with shellac polish, one untreated) and one test panel with artificial soiling were cleaned using nine different cleaning methods. The cleaning results were assessed both objectively, using gloss and color measurements, and subjectively, using standardized visual criteria. The results show that gloss measurements are especially useful for varnished, shiny surfaces, while color measurements—particularly the L* value—provide the best results for untreated and artificially soiled surfaces.
Bachelor's thesis, 2025, HAWK, DOI: 10.5165/hawk/550

Photo: Julian Witthaut

Recording of Hornemann Kolleg Lecture

The recording of the lecture by Prof. Dr. Dipl.-Rest. Ursula Schädler-Saub and Dipl.-Rest. Sabine Krause-Riemer M.A. "Das Fragment zum Sprechen bringen“ *(Making the fragment speak*) on the DFG research project "A digital toolbox for researching and communicating fragmentary wall paintings" can now be found here.

Photo: HAWK (Ursula Schädler-Saub, Sabine Krause-Riemer)



EwaGlos - Further Use Is Planned in an ISO Standard

Our European glossary for wall paintings and architectural surfaces, known as EwaGlos (European Illustrated Glossary of Conservation Terms for Wall Paintings and Architectural Surfaces), has been available free of charge in 17 languages since 2022.
And there's more:
The newly founded ISO/TC 349 committee, initiated by China, is planning an ISO standard on the topic of 'Classification of wall painting deterioration'. The committee intends to incorporate the names and definitions/descriptions from EwaGlos into this standard. As soon as the project (NWIP) has been officially approved, all member states will be invited to participate in the work.

Salzwiki

Salzwiki - Input Currently Not Possible

Our specialist portal, SalzWiki, consists of the German-language SalzWiki (www.salzwiki.de) and the English-language Saltwiki (www.saltwiki.net), as well as a non-public repository of research data. It is moving to the Leopold Franzens University of Innsbruck. The contact person at the university is Dipl.-Ing. Dr. Anja Diekamp, a materials technology specialist from the Institute of Design and Materials Science.
Until it can be made available in a revised and expanded form, SalzWiki will remain online with us, but without the option of input.

Online Courses

Online Courses

Our next full programme of courses starts on 6 October. You can register until 17 September.

- Damages to Cultural Heritage Caused by Salts
- Mould and Documents

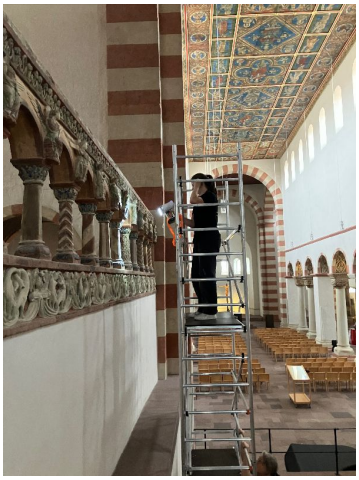
- Microbial Infestation of Objects of Art and Cultural Heritage
- Church Rooms and their Climate. Heating, Ventilation, Equipment Protection
- Photography as a Tool for Documentation and Examination
- Consolidation of Wood. Possibilities and Limits of Structural Consolidation
- How to Safely Handle Contaminated Cultural Heritage
- The Examination of Transparent Coatings on Furniture and Wooden Objects
- Restoration Theories and Methods from 1945 to the Present Day
- How Should We Act? Theory and Ethics of Conservation and its Significance in Practice (Renaissance and Baroque Period)
- Conservation of Globes

New: credits are now also available!
Starting in the winter semester of 2025/26, we will be awarding ECTS credits for microcredentials for the first time. The online courses "Mould and Documents" and "Conservation of Globes" have been selected as pilot courses.
A microcredential is a short academic course that concludes with a digital certificate and ECTS credits from an accredited university. This allows you to demonstrate to your employers and customers that you have specialist knowledge in a specific subject area.

New: The course "Damages to Cultural Heritage Caused by Salts" is now also offered in English.

What else would you like to learn?
We have the capacity to develop new courses again in the coming year. Do you have any requests? Do you have any ideas for qualified authors with teaching experience?

Research



Digitisation of the Romanesque Stucco Fragments of St. Michael's in Hildesheim

In the meantime, the fragments preserved in depots and the stucco work in situ have both been digitised, providing better opportunities for research and documentation. The final publication of the interdisciplinary research project is expected in a few months.

Photo: Universität Heidelberg (Matthias Untermann)

VDR-Conference "Analysen für die Praxis" (*Analyses for Practice*)

Hybrid: Hildesheim & online
Early bird tickets available until 2 October 2025
5–7 November 2025, Hildesheim, HAWK

The Furniture and Wooden Objects Specialist Group of the VDR invites you to attend the conference "Analysen für die Praxis - Untersuchungsmethoden für Holzobjekte in der Restaurierungswissenschaft" (*Analyses for Practice - Investigation Methods for Wooden Objects in Restoration Science*) at HAWK in Hildesheim from 5 to 7 November 2025. The conference will focus on efficient and meaningful analysis methods in the field of furniture and wooden objects. The influence of analysis results on restoration concepts will be examined to gain insight into the advantages of traditional and innovative examination techniques. Further information is available here.
Communication will be in German.

Online Information Day: Conservation and Restoration

14 January 2026, 3.30 p.m., HAWK

The Faculty of Architecture, Engineering and Conservation at HAWK invites you to an online information day on 14 January 2026, where you can find out more about the Bachelor's degree programme in Conservation and Restoration. You will gain insights into the programme's requirements and content. Lecturers and students will introduce the programme and answer your questions. The programme will be published here at the end of the year.
Communication will be in German.

HAWK Faculty of Architecture, Engineering and Conservation Hildesheim

Abstracts of University Papers

Bachelor Theses

Katja Bolz:
Einzelfadenverklebung an Leinengewebe mit der Methylcellulose Benecel™ A4 *(Thread-by-thread tear mending on linen fabric with the methylcellulose Benecel™ A4C)*

Pauline Böttcher, Sophia Niebel:
Die Kanonissinnen vom Dach - Technologische Untersuchung und Konservierung eines aufgefundenen Bauteils aus der Stiftskirche Bad Gandersheim *(The Canonesses from the Roof - Technological Investigation and Conservation of a Recovered cladding from the Collegiate Church of Bad Gandersheim)*

Ann-Marie Brekenfeld:
Charakterisierungsmöglichkeiten von Kunstfasern

mittels Chlorzinkiod und C-Stain (*Possibilities of identifying synthetic fibers with Zinc chloride iodine solution and C-Stain)*

Laurenz Günter:
Eine Kassette mit Blockintarsien Kunsthistorische Analyse und Entwicklung eines Konservierungskonzepts *(A Casket with Block Intarsia Art-Historical Analysis and Development of a Conservation Concept)*

Lucie Hoppenstedt:
Empfang in ländlicher Idylle – Die Dekorationsmalerei von 1922 in der Diele eines Lübener Landhauses – Bestand, Zustand und Überlegungen zur Konservierung und Restaurierung. (*Entering a Rural Idyll - A Decorative Wall Painting from 1922 in the Hall of a Country House in Lüben – Composition, Condition, and Considerations for Conservation and Restoration.)*

Thea Kohlenberg:
Die Heiligen von Sottrum – Erhaltung und Präsentation der fragmentarisch erhaltenen gotischen Wandmalerei *(The Saints of Sottrum: Preservation and Presentation of the fragmentary gothic wall painting)*

Jessica Schreiber:
Die Entfernung von Stempelfarben aus Fotoschichten von Silbergelatinepapieren durch Kapillarwirkung und Adsorption *(Removing stamping inks from photographs on silver gelatin paper through capillary force and adsorptivity)*

Beate Schrepp:
Entwicklung eines Konzepts zur Zustandserfassung für Kleindenkmale am Beispiel der steinernen Kleindenkmale in Reicholzheim *(Development of a concept for documenting the condition of small monuments using the example of the small monuments in Reicholzheim)*

Svenja Thien:
Analyse eines textilen Schmuckkapital-Fragments an einem spätmittelalterlichen Holzdeckelband aus dem Inkunabel-Bestand der Dombibliothek Hildesheim Entwicklung eines Sicherungskonzepts anhand einer separaten Rekonstruktion *(Analysis of a textile endband fragment on a late medieval wooden board binding from the incunabula collection of the Dombibliothek Hildesheim Developing a concept for conservation based on a separate reconstruction)*

Julia Tilkorn:
Salzreduzierung bei beschichteten Architekturoberflächen *(Salt reduction on coated architectural surfaces)*

Master Theses

Quirin Amadeus Herzinger:

Ein ursprünglich schwarzer Kabinettschrank des 17. Jahrhunderts - Rekonstruktionsversuche der Farbigkeit *(An Originally Black Cabinet from the 17th Century- Attempts to Reconstruct the Color)*

Emelie Hippmann:
Triumph der Galathea – Ein Pasticcio? Technologische Untersuchung eines Gemäldes des 17. Jahrhunderts aus der Kunstsammlung der Universität Göttingen und Erarbeitung eines Behandlungskonzeptes *(Triumph of Galatea – A Pasticcio? Technological examination of a 17th-century painting from the art collection of the University of Göttingen and development of a concept for Treatment)*

Karay Klenner:
Schimmelbefall im Freilichtmuseum Detmold: Herausforderungen und Lösungsansätze im Haus Kayser-Henke *(Mould Infestation at the Detmold Open-Air Museum: Challenges and Solutions at House Kayser-Henke)*

Linus Meidinger:
Von selbstklebend bis reaktivierbar: Beschichtung von Sicherungspapieren für die Konservierung von Gemälden und gefassten Holzobjekten – eine experimentelle Studie *(From Self-Adhesive to Reactivatable: Coating of Facing Papers for the Conservation of Paintings and Polychrome Wood Objects – an Experimental Study)*

Henning Pelster:
Das Porträt "Fürstbischof Ferdinand von Fürstenberg II" aus dem Heimathaus in Hörstel, Technologische Untersuchung und Entwicklung eines Konservierungs- und Restaurierungskonzeptes *(The portrait "Fürstbischof Ferdinand von Fürstenberg II" from the Heimathaus in Hörstel, technological examination and development of a conservation and restoration Concept)*

Laura Schulz:
Retusche einer Farbmigration - Methoden, Materialien und ethische Überlegungen bei der Konservierung eines Siebdrucks von Franz Erhard Walther *(Retouching a color migration - Methods, materials, ethical consideration in the conservation of a screen print by Franz Erhard Walther)*

Your team from the Hornemann Institute
Nina Niemeyer-Thömel, Dipl.-Ing. Gunnar Werner, Kassandra Wirth M.Sc., Dr. Angela Weyer M.A.

Responsible for the contents are: Dr. Angela Weyer
President: Dr. Marc Hudy
Head of Administration: Dr. Anne Faber
Thank you for subscribing our newsletter.
Please recommend this newsletter to your friends and acquaintance.

Contact:
HAWK University of Applied Sciences and Arts
Hildesheim/Holzminden/Göttingen
HORNEMANN INSTITUTE
Keßlerstr. 57
31134 Hildesheim
Germany

HORNEMANN INSTITUTE
CENTER FOR THE PRESERVATION OF WORLD CULTURAL HERITAGE