

## TRANSNATIONAL ACCESS

### User report

Please note that the fields marked with the asterisk\* and the photos will be published on the IPERION HS website ([www.iperionhs.eu](http://www.iperionhs.eu)) and released under the CC-BY-NC license.

#### Platform/s accessed

- ☐ FIXLAB
- ☐ MOLAB
- ☒ ARCHLAB

#### Project Title\*

AORUM [Analyse de l'OR et de ses Usages comme Matériau pictural / Analysis of gold and its uses as a painting material, 16th – 17th c.]

#### User Group Leader\*

Romain THOMAS

#### Venue\*

RCE Amsterdam

#### Date

22 March 2022 – 24 March 2022

#### Summary\*

In the middle of the 17th-century, painters as famous as Rembrandt or Vermeer have used some gold in some of their paintings. The AORUM project in its entirety aims to study the uses of gold as a painting material at the time of its disaffection (16th and 17th c.), in a context of profound cultural and artistic changes. Well studied for the late Middle Ages, this material is generally ignored by specialists of the Early modern period, even if it is still (more rarely) used. An interdisciplinary team (art historians, curators, chemists, physicists, conservators, data scientists) proposes to gather the paintings corpus thanks to a study into main European collections, and to study it through several art historical questions (Work Package 1); to proceed with the physico-chemical characterization of the various techniques used (WP2); to study their optical effects (WP3). The aim will also be to propose recommendations in conservation, restoration and museography practices to ensure that this material is better taken into account and appreciated by a wide public. The DATA will be processed thanks to the ESPADON project. The results will be disseminated by means of conferences, publications and website. Several post-doc researchers (art historian, chemist, physicist) are going to be financed from October 2021 onward by the Fondation des Sciences du Patrimoine.

Our IPERION-HS/ARCHLAB visit at the RCE related to WP1 and WP2. It was aiming to search for any easel painting, whatever its support (wood, canvas, stone or copper), whatever its technique (tempera, oil...) where the painter has used gold. It was aiming also to gather as many pieces of information as possible about the gilding technique(s) employed by the painter in those paintings. A small team (two art historians, one physical-chemist and one conservator) have visited the RCE as an ARCHLAB provider and looked at scientific reports, scientific datasets, and sample collections.

## Report

- *Introduction, motivation and Scientific objectives of the visit*

The first task of AORUM project is **to gather the corpus**, ie to search for all kinds of easel paintings, whatever their support (wood, canvas, stone or copper), whatever their technique (tempera, oil...) where the painter has used gold, and produced in western Europe (French kingdom, Spanish Netherlands, Dutch Republic, German countries, Italian states, Iberic peninsula, Great Britain) between around 1500 and 1700. The RCE archives were thus a key source to expand our corpus. We were interested in **scientific reports, scientific datasets, images, conservation reports**, ie any documentation that can help us gathering our corpus of paintings.

The second major aim of our visits in ARCHLAB providers' archives was to learn as much as possible about the **gilding techniques** used in the identified paintings. In this regard, scientific reports, scientific datasets, conservation reports, and sample collections will be of help to enquire.

- *Reasons for choosing IPERION HS facilities*

IPERION HS/ ARCHLAB is the best way to search in the archives of scientific enquiries concerning the artworks from the main museums and collections in Europe. This is exactly what we need. Some AORUM members have been acquainted with IPERION for a long time. The AORUM team have already worked with IPERION HS facilities in Nov 2021 (National Gallery Sc Department) and the stay there has been very fruitful. This is the reason why we applied to the RCE and the OPD, and again to the NG for 1st semester 2022.

- *Activity during your visit (please describe the steps taken, instrumentation used, techniques employed, data sources consulted, etc.)*

-In the RCE we could consult all the documentation of the center concerning the analyses, be it the "boeks" (books) with all the cross-sections, or the complete scientific reports of analyses of some artworks.

-We could discuss with the RCE team, and Ineke Joosten organised a meeting for us to present our project in detail.

-Ineke Joosten conducted a SEM analysis on a sample that was of great interest for us.

- *Method and set-up of the research*

For every ARCHLAB provider visited, our methodology will be to proceed in a chronological regressive way, ie beginning with 17th-century paintings, then 16th c. Indeed, we expect to find much less paintings containing gold in the 17th-century, then the research will in all likelihood be easier for later periods. On the basis of this built corpus and all the documentation gathered, a series of questions will be examined. Firstly, the dynamics of the uses of gold as a painting material will be examined over time and in the areas studied. From a symbolic and iconographic point of view, do some uses last longer than others (golden backgrounds, golden objects, halos represented with gold and by various techniques, chrysography, etc.)? Etc.

- *Project achievements during the visit (and possible difficulties encountered)*

We could add a few paintings to our corpus, and the SEM analysis was very interesting in that the painting concerned is original compared to what we had found so far (gold ground for a late 16<sup>th</sup> c painting with mordant gilding).

The meeting with RCE colleagues and the discussion was extremely interesting. Dutch colleagues signaled us a work done a few years ago on the Oranjezaal (The Hague), which is of crucial importance for AORUM, as a point of comparison for other results.

Difficulties: many archives were in Dutch, but the Group Leader reads Dutch and his colleagues could work with online translation tools as well. Other archives were in English.

- *Preliminary project results and conclusions*

So far, we identified around 400 paintings with gildings from the 16<sup>th</sup>-17<sup>th</sup> c.

- *Outcome and future studies*

We are going once again to the National Gallery (31 May – 1 June) to visit the stores and add pictures to our corpus. On 6-7-8 July, we will be at the OPD to search for archives of analyses.

Next semester, we might apply for and ARCHLAB access to Prado, KIK-IRPA, SPK. In the future, we might apply to FIXLAB and/or MOLAB facilities.

### Expected publications, presentations and other dissemination activities

The impact and dissemination of the research carried out in the framework of AORUM will take several forms.

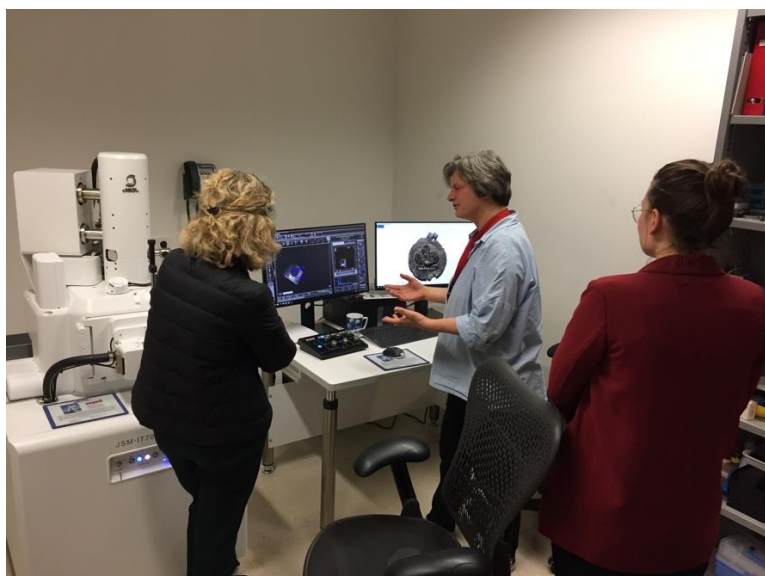
One of the project's fundamental enhancement actions will be the **management and opening of data** in connection with the Equipex ESPADON (<http://www.sciences-patrimoine.org/2020/12/selection-espadon/>). ESPADON is both a research infrastructure dedicated to Heritage Science (instruments) and a research project aimed to develop a Digital Humanities model for an 'Augmented Heritage Object'. This will be done in particular by building and integrating into the Information System to be built a set of descriptors dedicated to the categories of visual perception of the heritage object (e.g. gloss/mattness, transparency/translucency, texture). In this context, we will reflect on ontologies allowing to describe the appearance of heritage objects - the case of gold and its gloss can be used as a starting point. This will have an **impact on the work of describing and analyzing the condition of works for art historians and curators, restorers, physicists and chemists working on these artefacts**. The post-docs recruited will take part to this reflection. The project data will be distributed in accordance with the principles developed in the framework of ESPADON and will also be accessible through the ESPADON interface. The licenses under which the data will be made available will be as far as possible open licenses, in conformity with the licenses of the ARCHLAB providers.

An **international and interdisciplinary symposium** will be organized in June 2022, and we will publish a peer-reviewed book afterwards. In the long term (2025), it is planned to organize a second international symposium, with proceedings to be published in **the journal *Technè***. The scientific production will be made available online, according to the principles of **open science**. The dissemination of research will also be done within the framework of the **APPAMAT GdR** ("Appearance of materials, surfaces and objects"; CNRS).

We will also endeavor (this is a desired perspective but not part of the project) to consider the **preparation of an exhibition** on the corpus constituted, the gilding techniques studied and their effects.

### Captions for the photos\*

*Please, provide 1 or more high-quality photos, preferably in horizontal format, taken during the access and write here the captions for the photo/s.*



*Photo 1 – SEM analysis during the ARCHLAB stay in the RCE for AORUM project, March 2022.*



*Photo 2 – SEM analysis during the ARCHLAB stay in the RCE for AORUM project, March 2022.*