

# BeAM

## Belgian Abstract Modernism in the Spotlight: technical art history research with a focus on synthetic organic pigments for improved dating and conservation

DURATION  
01/09/2021 – 01/12/2025

BUDGET  
876 534 €

### PROJECT DESCRIPTION

At the end of the 19th century, innovations in science, industry and technology gave rise to a collective idea of progress. It was in this spirit of striving for the new that modernism saw the light of day in art, culminating in one of the most important developments in art since the Renaissance: abstract art. Various abstract movements develop into a new visual language, in which form, color and line are central.



Figure 1. Belgian Abstract Modernist paintings by Felix De Boeck. Left: Paysage abstrait, 1923, Donation S. Goyens de Heusch, Musée L. Right, the replica: Compositie; 1960, collectie Vlaamse Gemeenschap, FeliXart Museum.

In Belgium the Abstract Modernism movement was active between 1919 and 1928. However, it soon became clear that public recognition was very limited at this time. It would take until 1959 that pioneering artists such as Felix De Boeck, Karel Maes, Georges Vantongerloo and Jozef Peeters became known to a larger public. If this fascinating but undervalued period in Belgian art history is to be truly valorized and opened up, systematic research is needed to characterize and compare the artistic production of these two time periods.

One of the most important questions about this Belgian abstract movement is whether it already was a full-fledged movement in the first period during the 1920s or simply a second-rate epigone of Dutch and Eastern European groups. To determine this, the artistic evolution of the artists needs to be reconsidered. This is somewhat problematic due to the revival of the appreciation of abstract art post 1950s, giving rise to two curious phenomena: reworking of existing compositions and antedating (figure 1). Indeed, there is much discussion about the correct dating of abstract paintings from the 1920s in Belgium. This of course complicates the reconstruction of the artist's timeline. Moreover, the knowledge from the art historical and archival research is limited and must be further enriched with knowledge of the materials that were employed and their state of conservation.

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The key to dating paintings lies in the materials used. Hundreds of synthetic organic pigments (SOP) were introduced mainly in the 20th century, of which the discovery date is often known. Identification of SOP in a painting therefore allows us to define an earliest possible creation date, which can help to accurately date possibly antedated works and to estimate the extent to which existing paintings were reworked. The binders also underwent radical changes, and can therefore further help in the dating of these abstract paintings.

To map the evolution in materials' use over time, many paintings need to be studied. This implies that the use of non-invasive techniques including macro-X-ray fluorescence (MA-XRF), macro-X-ray powder diffraction (MA-XRPD) and macro-Fourier transform infrared scanning. In combination with more traditional imaging techniques such as UV-photography, infrared reflectography and X-radiography, and non-invasive point Raman measurements, a whole range of techniques is now available that enables a detailed material-technical study of many paintings, with a focus on paintings by Felix De Boeck. Binders can be studied non-invasively up to a certain level, but micro-samples are necessary for more detailed characterization by pyrolysis gas chromatography-mass spectrometry (Py-GCMS) and liquid chromatography orbitrap mass spectrometry (LC-orbitrap-MS).

A true reassessment of Belgian abstract modernism is not possible without showing these paintings to a broad audience. But this is not without risk. The rapid introduction of many new materials in the first half of the 20th century can now cause problems. A limited number of studies indicate the lack of photostability of some of these modern pigments (figure 2) and the negative effect they have on the binder. More thorough research on SOP is urgently needed to assess their stability, and to understand their behaviour in a paint matrix.

The project therefore has several objectives that are strongly intertwined. The main objective is the reevaluation of Belgian abstract modernism and its correct positioning within a cultural-historical and global context through extensive material-technical research using mainly non-invasive analytical techniques, supplemented and supported by art historical research. By studying two important time periods for Belgian abstract modernism – the 1920s, quite soon after the introduction of SOP, and post-1950, when SOP are well-established - the rise of SOP will be mapped. The presence of SOP and likely also of synthetic binders in modern paints will allow us to identify and resituate them in their genuine observation and the study of the in a real paint matrix will lead to information can then form the basis for and might also be used in the study of



Figure 2. Detail of a painting by Constant Montald (1908) showing light induced degradation of several pigments.

Near the end of the project an exhibition centred around the most important paintings studied will be organized in the FeliXart museum. This is also the ideal moment to put the analysis techniques in the spotlight and to illustrate how the bridge is made between art historical research and cutting-edge analytical technology.

## CONTACT INFORMATION

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## LINKS