

# URUGUAYAN MURAL PAINTING HERITAGE: PATRIMONIAL ACTIVATION, SCIENTIFIC CATALOGATION AND ITS SOCIO-HISTORIC REPERCUSSION

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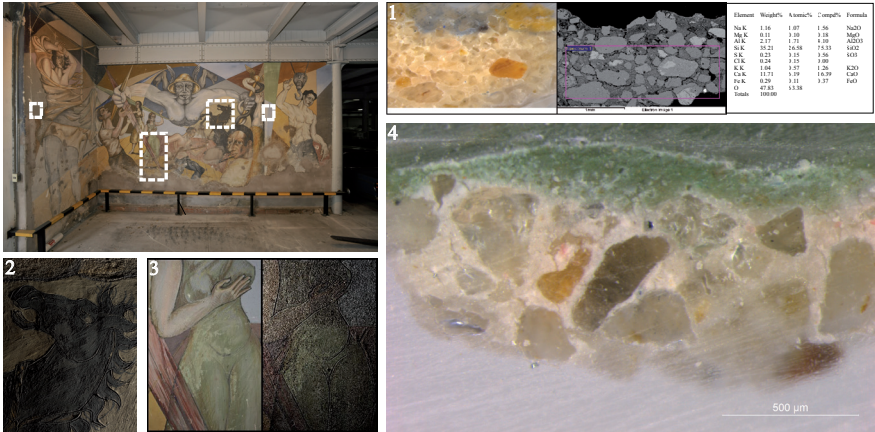
## Introduction

The investigation that has taken place within the CRBC department to complete the students dissertations, is part of the **PROJECT “Diseño e implementación de políticas culturales inclusivas: el muralismo uruguayo contemporáneo como herramienta de activación patrimonial sustentable” [ref. HAR2012-32060]**, funded by the “Dirección General de Investigación Científica y Técnica del Ministerio de Economía y Competitividad”

## Dissertation Objective

This research aims to establish the importance of Maritime Art in the development of Montevideo city and in the 20th Century Uruguayan society. The painting techniques used on the Montevideo murals will be studied through several analytical methods in order to determine the methodology the artists used. The investigation will compare Eloy Boschi and M. A. Zelayetta murals to define the similarities and differences of their mural creations.

The mural “El Mercurio” (1972) placed in the Montevideo Harbor is an example of the conceptual influences left by the Mexican muralist David Alfaro Siqueiros in Uruguay. Analytical examination of the work allows for a better understanding of the methodology and technical approaches the artist undertook on the mural.



1. Plate. Cross section (x20) and X-ray image. The results confirm the use of calcium carbonate and silica in the ground layer.
2. Plate. Detail photographed in raking light showing that the drawing cartoon has been transfer to the surface by means of incision lines with a pointy stick. The differences in color saturation reveal that some areas might have been retouched after the fresco hardened (secco retouching)
3. Plate. Detail photographed in normal and raking light that enables to appreciate the boundaries of a work field (giornata)
4. Plate. (x40 magnification) Cross section revealing the different coatings: 1. Ground layer of plaster composed of coarse grains. 2. The above layer of paint shows green and yellow pigment grains embedded within the ground.

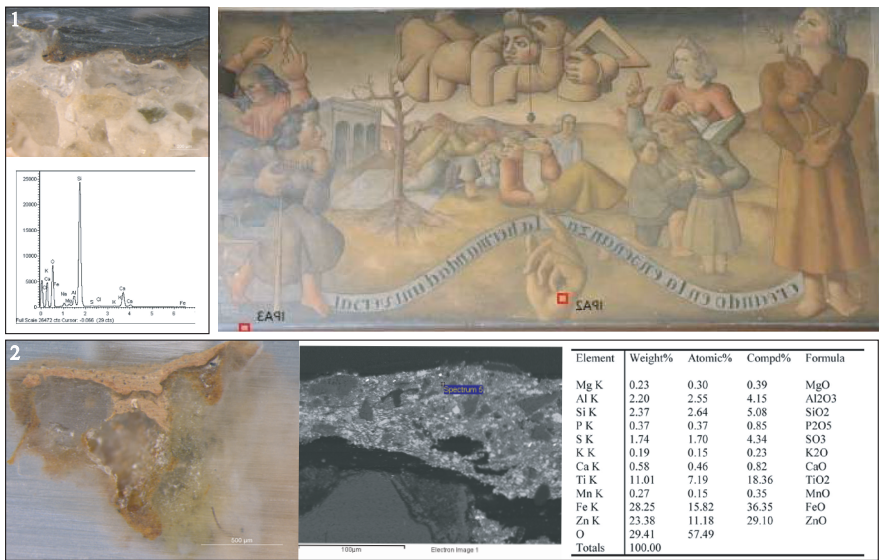
## Dissertation Objective

The painting samples taken during the 2011 campaign were characterized by LM, SEM/EDX and FTIR-ATR, by the Uruguayan Muralists of the 20th century. The study takes into account the em for industrial products to be also used as artist materials.

The investigation shows the scientific catalogation results carried on selected murals under a formal, conceptual and technological point of view.

The scientific characterization from the paintings samples taken during the 2011 campaign, were analyzed by means of a physical-chemical analysis, result of a morphological and chemical study LM, SEM/EDX, FTIR.

The mural “La mujer compañera del hombre” ( 1941) is the first significant wall painting by Demetrio Urruchúa. The fresco shows the influences by the Social realism movement and is dedicated to the fundamental female existence.



1. Plate. Cross section (x50) and X-ray image. The results confirm the use of calcium carbonate, calcium sulphate and silica in the ground layer.
2. Plate. Cross section (x40) X-ray image. The results confirm the use of mineral pigments in the above layer.

## Conclusion

The results of the investigation enable the achievement of a new context for the process of material characterization allowing the students to use part of the skills acquired during the program. It also emphasizes a new aspect by which the techniques and methods applied are closely related to the socio-historic events that surrounded the artists.

## Acknowledgements

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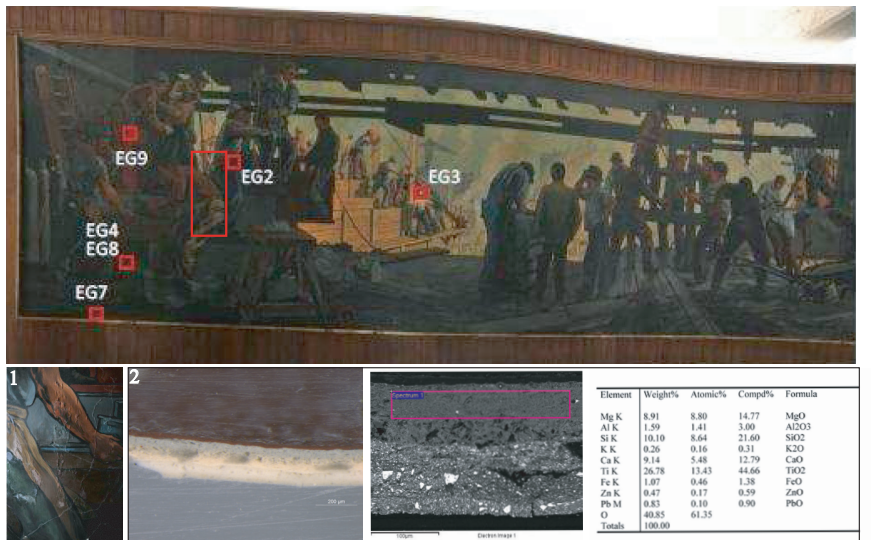
The main **OBJECTIVE** of this project is to promote and activate the cultural significance of the mural painting production created in Uruguay during the 20th centuries as representative spaces and identity holders of key elements for achieving a sustainable social and economic development. The dissertation projects show the results of the investigation undertaken to **CHARACTERIZE THE MATERIALS** used in the most representative works of several Uruguayan painters by means of Fourier transform infrared (FTIR) Spectroscopy, Light Microscopy (LM), Scanning Electron Microscopy (SEM) and X-ray Diffraction (XRD).

Miguel Angel Zelayetta, mural (1964) placed within the “Administracion Nacional del Puerto de Montevideo” depicts the Uruguayan historic events led by the General Artigas. The analytical examination confirms that the artist also used the fresco technique on its manufacturing



1. Plate. Cross section (x50) and X-ray image. The results confirm the use of calcium carbonate and silica in the ground layer.
2. Plate. Cross section (x50) particles of silica and pigment embedded together.
3. Plate. Analysis under raking light reveal the changes in the composition the artist made on the mural.
4. Plate. As part of the scientific catalogation, colorimetric studies have been undertaken on the murals. The process involves recollecting color data of selected points that will be kept for future references.

“Obreros de la construcción” (1964) painted by Esteban Garino is an example of Uruguayan mural painting where synthetic materials were used on its manufacturing.



1. Plate. Cross section (x40) and X-ray image. The results confirm the use of products from industrial materials.
2. Plate. Detail photographed in normal light shows that the mural has been retouched at a later stage (probably during an old restoration).