Electrons for art

ICFO and MNAC collaborate to analyze Romanesque mural paintings.

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ICFO?s research facilities also have applications in the world of art conservation. Dr. Johann Osmond, engineer in the NFL, has collaborated with Nuria Oriols i Pladevall and Paz Marques in the group of Restauration and Preventative Conservation led by Mireia Mestre at MNAC (Museu Nacional d'Art de Catalunya) on a study entitled "SEM-EDX analysis of transferred wall painting to determine original painting technique" which will be presented in the Technart Conference (Cagliari, 27-30 April 2015).

Analytical techniques such as scanning electron microscopy coupled with energy-dispersive X-ray spectroscopy (SEM-EDX) available at the ICFO NanoFabrication Lab (NFL) were used to analyze mural painting samples and the distribution of their chemical elements. The pigments used and the original painting technique (fresco or secco) could then be

investigated. The painting technique study was then applied to some original Romanesque detached and transferred wall paintings from the MNAC, such as the frescoes of Sant Climent de Taüll.

This collaboration with MNAC came about in part due Johann?s previous experience in art conservation, having worked with Prof. Antonietta Gallone-Galassi at Politecnico di Milano, to whom this study was dedicated.

Frescoes of Sant Climent de Taüll at MNAC , © Museu Nacional d?Art de Catalunya, Barcelona (2015) | Foto: Jordi Calveras