

FORTHCOMING PUBLICATION

SEM and microanalysis in the study of historical technology, materials and conservation.

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To be published by Archetype Publications in association with The British Museum, autumn 2012.

This volume contains written versions of oral and poster presentations given at a two-day meeting entitled "SEM and microanalysis in the study of historical technology, materials and conservation" held at the British Museum on 9th-10th September 2010, organised by the Department of Conservation and Scientific Research at the British Museum, in association with Hitachi High-Technologies Europe. While this volume will be of relevance to all with an involvement or interest in the application of scanning electron microscopy and microanalysis (SEM-EDX) to the study of materials, manufacturing methods and deterioration processes of objects from ancient through to contemporary cultures, we hope it will also be of wider inspiration to those using these techniques in other fields. The purpose of the meeting was to explore the huge influence that SEM and microanalysis have had over the decades on the understanding of the material technologies and associated cultures that produced such objects and on the conservation and preservation of these materials for the long-term benefit of world cultural heritage. While broadly falling under three categories, 'materials, technology and manufacturing processes', 'conservation' and 'new applications and instrumental developments', the wide range of topics represented by the 46 papers included in the volume demonstrates the variety of investigations being carried out across the world. They also explore how techniques have been developed to extend their use into new fields and showcase some of the new applications and instrumental developments. In addition to SEM-EDX, case-studies highlighted the use of complementary scientific techniques including TEM, FIB-SEM, high resolution X-radiography, XRF, XRD, EBSD and SEM-CL.

OPA readers might find the following papers (listed alphabetically) of particular interest:

Kelly Domoney, Andrew Shortland and Sebastian Kuhn "Characterisation of an eighteenth century Meissen plate from the Götzendorf-Grabowski service using VP-SEM and HV-SEM".

Edward W. Faber "Reconstructing firing practices of Middle Minoan polychrome ware: the role of bloating pores in slips".

Alessandro Lo Giudice, Alessandro Re, Debora Angelici and Giovanni Pratesi "Characterisation of lapis lazuli for a provenance study by means of SEM-EDX and SEM-cathodoluminescence".

Lara Maritan, Michele Secco, Claudio Mazzoli and Gilberto Artioli "Secondary phases in archaeological and historical materials: a microstructural approach for interpreting the correct sequences of crystallization".

Patricia Mestre, Fernando Rocha and João Coroado "Analytical characterization of bole used in gilded plasterwork (Arab Room, Palácio da Bolsa, Oporto, Portugal)".

Moslem Mish Mast Nehi, Hamid reza Chaman and Mohammad Mortazavi "SEM and optical microscopic study of gilded tiles from Darb-i Imam Tomb in Isfahan, Iran".

Daniel Sahlén "Scanning electron microscopy and ceramic technology: crucibles from late prehistoric Scotland".

Margherita Serra, Lorenzo Appolonia, Alessandro Borghi, Stefano De Leo and Valentina Rubinetto "A petrographic study of the anthropomorphic stelae from the megalithic area of Saint-Martin-de Corléans (Aosta, Northern Italy)".

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