

# Archaeometry

## Introduction

The activity developed in this area was essentially divided between the following items: 1) radiocarbon dating, 2) provenance studies, 3) studies of ancient technologies, 4) studies of monetary history and 5) scientific examination of works of art.

An effort has been made to persuade the *Instituto Português de Arqueologia* to finance the continuation of the study of Lusitanian amphorae by submitting to that organisation a research project for investigating amphorae from *Quinta do Rouxinol* (Tagus valley) and *Pinheiro* (Sado valley). This project was approved at the end of the year, which will permit to start the experimental work in this field again at the beginning of 1998.

## Research Team

Researcher - 1 (PhD)  
 (+ staff from Earth Sciences group)

## Publications

Journals - 3  
 Proceedings - 1  
 Special Publ. - 2  
 Conf Commun. – 1

	10 <sup>3</sup> PTE
<b>Expenditure:</b>	<b>31.458</b>
Missions:	239
Others Expenses:	817
Hardware & Software:	0
Other Equipment:	30.402 <sup>(1)</sup>
<sup>(1)</sup> Includes the Scintillation Detector for Carbon-14 and the Mass Spectrometer	

		10 <sup>3</sup> PTE
<b>Funding:</b>		<b>31.458</b>
OE/ITN	OF	456 <sup>(1)</sup>
	PIDDAC	9.360 <sup>(2)</sup>
External Projects:	1996	15.024 <sup>(3)</sup>
	1997	4.493
Others		2.125
<sup>(1)</sup> This cost will be covered by external funding		
<sup>(2)</sup> Includes the Scintillation Detector for Carbon-14		
<sup>(3)</sup> Funding not used in 1996		

**Note:** The equipmet included here is used by several other groups.



## **Absolute chronology for Bell Beakers in Estremadura and the South of Portugal**

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### **Abstract**

At present twenty radiocarbon dates are known for Bell Beakers in Estremadura and the South of Portugal. On the other hand, recent archaeological digging allowed to isolate well defined Bell Beakers contexts, which were radiocarbon dated. These new data allow new interpretations for the Bell Beaker phenomenon, as a more precise chronology for the different pottery styles.

“*O Arqueólogo Português*”, Série IV, 8/10, Lisboa, 1990-1992, p. 203-228 (published 1997).

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## **Caracterização de Materiais Arqueológicos. 2 - Materiais Artificiais e Tecnologias de Fabrico**

*J.M.P. Cabral*

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### **Abstract**

The application of petrographic and metallographic examination, as well as of other analytical techniques such as the scanning electron microscopy, for the study of various archaeological materials and the processes used in their manufacture, is briefly reviewed.

Al-madan, II<sup>a</sup> Série, n<sup>o</sup> 6 (1997) 15-26.

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## **A Moeda Sueva: Suevic Coinage**

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<sup>1</sup>*Departamento de Química, ITN, P-2686 Sacavém Codex, Portugal.*

<sup>2</sup>*Heberden Coin Room, Ashmolean Museum, The University of Oxford, Oxford OX1 2PH.*

### **Abstract**

A monograph on the Suevic coinage has been written, covering the following items. 1) Stylistic analysis: the siliquae, the solidi, the Valentinianic tremisses, the LATINA MVNITA tremisses, die-estimation; 2) Metrological analysis: the weights of the coins, alloy compositions; 3) Final considerations: the *status quaestionis* and plans for future research, check-list of provenances, collections containing Suevic coins, annotated bibliography; 4) Catalogue.

Anexos *NVMMVS* N° 4, Sociedade Portuguesa de Numismática, Porto, 352 pp.

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## **História breve dos pigmentos: 2 - da arte egípcia**

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### **Abstract**

The physical and chemical characterisation of pigments used by Egyptian artists is reviewed. The results obtained have shown that many of the pigments used by prehistoric artists, mainly the ochres and coal, continued to be used after the discovery of writing. With the art of Ancient Egyptians the first blue and green pigments have appeared, at first only natural products but after the IV<sup>th</sup> dynasty synthetic materials too. Little by little new pigments of these and other colours were being equally discovered, some of which still are constituent of the palette of painters.

*Química*, N.º66, (1997) 17-24.

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