

Foreword

Claude MORDANT and Martin SAUVAGE

Archaeometallurgy (of non-ferrous alloys) is a discipline which encompasses the entire field of ancient metallurgy, from the extraction of metals from their ores to the present state of archaeological objects, and has been rapidly expanding over the last two decades. Considerable progress in advancing the field is enhancing our knowledge, whether about ore extraction and mining activities, production processes (from ore to metal) or artefact transformation (from metal to finished product), as well as the lifecycle of metallic products (from finished products to their current status and location).

This structuring of archaeometallurgical research has been accompanied by several bulkheads: researchers are often specialists in one step of the *chaîne opératoire*, a type of approach, a category of scientific analysis, a specific material or a particular geographic area or time period. It makes for research compartmentalized between different approaches such as mining archaeology, archaeometry, technology and archaeology on one hand, and, for example, between Europe and the Near East on the other. Although interdisciplinarity, which is now the norm, relativize this observation, the various specialists often have difficulty gathering and exchanging ideas due to their disparate methods, training, research traditions and questions.

Otherwise, it seems that archaeometallurgical research is developing in parallel in Europe and in the Near East, with relatively few bridges between these two regions, although some researchers navigate between these very different chrono-cultural, technical, environmental, and socio-political contexts.

This is why, in the framework of this conference, we wanted to create a dialogue between these two worlds. Our objective was to provoke a disciplinary, methodological, geographical, and chronological decompartmentalization to bring together researchers who are rarely in contact despite the complementarity of their approaches. We hope, in the long run, that this approach will allow us to strengthen ties, weave collaborations, and create an interdisciplinary research group on archaeometallurgy in the entire Old World.

The conference was organized around four axes, making four main sessions:

1. Mining and ore extraction activities

All evidence of ore exploitation and mining activities, whether they are direct or indirect, has been considered in this session.

2. Tools, actors and production loci: specialization and organization

This session was devoted to the organization of production and has questioned the notion of the 'workshop'. Who were the metalworkers? What was their degree of specialization? What was their socio-economic status? What was their symbolic position? What were their tools and their work environment? How were organized different stages of the metallurgical process? Can we distinguish different types of workplaces and/or activity areas according to geographical and chronological contexts?

3. The production process (chaînes opératoires), from metal to finished product

What were the processes and methods of manufacturing metal objects? Here, direct or indirect clues that provide information on the gestures, techniques, skills and know-how of ancient craftworkers were used to propose reconstructions of the metallurgical production process. As metals are complex materials whose physico-chemical structures condition their reactions, approaches combining material sciences and technological studies have been favoured here.

4. Exchanges and uses of metallic objects: from archaeological contexts to the laboratory

All approaches that allow us to question the circulation of metals, whether in the form of ores, ingots, semi-products, finished objects, or fragments of objects, found their place here. From physico-chemical and isotopic analyses to typo-chronological studies, through use-wear analysis and tribological approaches or the detailed study of archaeological contexts, allowing us to address the

question of the use, functions and circulation of metal, were considered here.

This conference was part of a series of meetings organised by the Société préhistorique française (SPF), in conjunction with the Association pour la promotion des recherches sur l'âge du Bronze (Aprab).

The idea of focusing on Bronze Age archaeometallurgy arose from an informal discussion between Claude Mordant and Martin Sauvage following a meeting of the board of directors of the Société préhistorique française. The theme had come to the fore with the SPF's publication of Marilou Nordez's PhD⁽¹⁾ and, more recently, that of Zahra Hashemi (Peeters).⁽²⁾ Archaeometallurgy interests a large community of scholars beyond Western Europe, particularly in the Near East even though few opportunities have been given to colleagues from these two geographical and cultural areas to meet and compare their work.

And this is why the SPF and the APRAB decided to organise this conference.

The Aprab and the Musée d'Archéologie Nationale (MAN) have been actively promoting research into the Bronze Age for many years now, and it was a natural step for them to enter into a partnership to host this international meeting.

Our thanks go to Rolande Simon-Millot and Christine Lorre for their enthusiastic reply to our proposal, and to Rose-Marie Mousseaux, Director of the MAN, for hosting the event.

Thank you to all the Museum staff for their commitment to the conference and to Sylvie Boulud, who is the APRABs treasurer.

This conference could not have taken place without the kind support (in particular financial support) from numerous partners and institutions.

Our thanks go to:

- the Musée d'Archéologie nationale - Domaine national de Saint-Germain-en-Laye ;
- the Société préhistorique française and the Association pour la promotion des recherches sur l'âge du Bronze;
- the Fondation Maison des Sciences de l'Homme;
- the Institut français du Proche-Orient in Beirut, and the French embassy in Iran;
- the “Archéologie et Sciences de l'Antiquité” joint research unit (UMR 7041 ArScAn) at Nanterre—including its team “Du Village à l'État au Proche et au Moyen Orient (VEPMO)”—and the “Travaux et recherches archéologiques sur les cultures, les espaces et les sociétés” joint research unit (UMR 5608 TRACES) at Toulouse;

- the Domaine de recherche d'intérêt majeur Patrimoines matériels – innovation, expérimentation, résilience (DIM Pamir) in the Île-de-France region;
- and the Research Commission of the University of Paris-Nanterre.

But the best institutional intentions must always be backed up by individual enthusiasm and effectiveness.... We would like here to thank again Zahra Hashemi and Marilou Nordez for all their help in organising this scientific event, this moment of discussion and debate and for their editorial work for its publication.

Concerning the editorial work, our warmest thanks go to the colleagues who kindly accept to participate in the reviewing of the present articles: Linda Boutoille, Florian Couderc, Léonard Dumont, Kristina Franke, Muriel Mélin, Emmanuelle Meunier, Pierre-Yves Milcent, Nima Nezafati, Omid Oudbashi, Véronique Pataï, Vincent Pigott, Bénédicte Quillec, Anna Sörman, Thomas Stöllner, Céline Tomczyk and Lloyd R. Weeks and also to Clare Gathercole who took charge of the English review of some articles.

We would like to thank all the participants very warmly for their positive response when asked to take part in the conference. Their enthusiasm has meant we have had to add on an extra half-day to the original schedule to accommodate everyone. Even with this prolonged conference, many colleagues who would have liked to take part or whom we would have liked to invite could not be included in the programme.

At the closing session of this first DEWA conference, we had already envisaged working towards a ‘DEWA 2’. This idea has gained momentum, and we are delighted to announce here that this second session will be held in December 2027 at the Bergbau Museum in Bochum, Germany, thanks to the enthusiastic support of our colleague Thomas Stöllner. It is a great satisfaction to see that this desire to open up our specialities ‘from East to West’ has been accepted.

Claude MORDANT

President of the *Association pour la promotion des recherches sur l'âge du Bronze (Aprab)*
Honorary President
of the *Société préhistorique française (SPF)*
claude.mordant@u-bourgogne.fr

Martin SAUVAGE

Former member of the Board of Directors
of the *Société préhistorique française (SPF)*
martin.sauvage@wanadoo.fr

1. M. Nordez, *La parure en métal de l'âge du Bronze moyen atlantique (XVI^e-XIV^e siècle avant notre ère)*, Paris, SPF (Mémoires de la Société préhistorique française, 65), 2019.
2. Z. Hashemi et al., *Sangtarashan : l'âge du Fer au Pish Kuh du Luristan*, Leuven, Peeters (Acta Iranica, 62), 2023.