**ASM INTERNATIONAL ARCHAEOMETALLURGY COMMITTEE: SCOPE and MISSION**

The specialty known as Archaeometallurgy is a subfield within Archaeometry, the application of scientific techniques to Archaeology. Archaeometallurgy is the study of the production and use of metals through the analysis of archaeological materials and historical evidence. The breadth of Archaeometallurgy ranges from the beginning of history to the recent past, and throughout the use of metals and material culture.

Archaeometallurgy is an interdisciplinary field composed of materials engineering, chemistry, archaeology, conservation, and restoration. The Archaeometallurgy Committee is built upon this framework to provide a venue for members who characterize archaeological metallic materials, perform provenance studies, reverse engineer, and perform authentication studies. This work supports conservation, restoration, preventative maintenance, and heritage education.

Archaeometallurgy in its broadest sense involves documenting historical development of industrially significant materials and material technologies is another important part of this Committee. This work is not only important for chronicling human endeavor, but also illustrates important lessons for current and future developments in materials and material technologies. This will be an interdisciplinary effort, bringing contributions from business, engineering, arts, and science fields together in one cohesive format. Chronicling historical developments in material science should also promote this field to the population in general by providing a relatively easily understood method of development and contribution to the society by this field of engineering. In this manner this Committee will link with the ASM International Historical Landmark Committee.

The Archaeometallurgy Committee began in September 2020 as a simple idea proposed through ASM Connect. We were met with exceptionally positive responses and interest from ASM members, so we were able to form an Archaeometallurgy community. We now seek to broaden our vision and become a formal committee within ASM International: the Archaeometallurgy Committee. As a formal Committee supported by a broader community, we will integrate various specialties through activities focused on supporting our mission.

The proposed Archaeometallurgy Committee began in September 2020 has developed from a simple idea proposed through ASM CONNECT. A query about interest in this subject met with exceptionally positive responses and interest from ASM members, so we were able to form an Archaeometallurgy community. We now seek to broaden our vision and become a formal committee within ASM International: the Archaeometallurgy Committee. As a formal Committee supported by a broader community, we will integrate various specialties through activities focused on supporting our mission.

* The objectives of the Archaeometallurgy Committee are:
1. Support ASM members and other who study metallic objects from historical/archaeological sites located throughout the world.
2. Develop and apply artifact restoration and conservation techniques based on material and context of an artifact.
3. Support cooperation and collaboration between ASM International and other entities related to the recovery of heritage sites and/or historical metallic monuments. This may include bibliographic review, metallographic and mechanical studies of artifacts, statistical analyses, cleaning, conservation, preservation, etc.
4. Provide and Help develop best practices for characterization, preventative maintenance, conservation, linking historical contexts with manufacturing technology, studying and advising on historical infrastructure (e.g., old metal bridges).
5. Incorporate colleagues from other fields related to the heritage studies, including pigment studies, authentication studies of ancient coins, etc.
6. Apply ethical restoration practices following AIC code of ethics and applicable regional guidelines
7. Organize and host technical presentations on Archaeometallurgy topics for the IMAT conference.
8. Learn, connect, collaborate, share, and grow with like-minded members dedicated to the study of Archaeometallurgy.
9. Promote the identification of industrially significant materials and material technologies as the subject of further historical investigation. This will be accomplished in a collaborative manner between business and the materials community.
10. Support the research, investigation, and documentation of the historical development for selected materials and material technologies. An interdisciplinary approach between materials, arts, and other science communities will be used for this effort.
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12. Act as an Advisory Board to ASM International for selecting and establishing ASM Historical Landmarks.
13. Promote Archaeometallurgy as a teaching aid by illustrating continuity in technological developments and providing context of the current state of technology.
14. Promote education (use past “lessons learned” and skills to educate students in new technologies)
* Work areas of focus include:
	+ Ancient and historic metallic artifacts
	+ Ancient and historic maritime and transportation artifacts
	+ Ancient and historic industrial sites
	+ Ancient and historic buildings of significance
	+ Archaeological sites
	+ Ancient and historic metallurgical research, documentation, and techniques
	+ Ancient, historic, and modern metallurgical characterization techniques
	+ Pictorial works and pigments
* Highlights of aspects of study include:
* Experimental archaeometallurgy
* Military vehicles, weapons and armour
* Conservation, preservation, and maintenance of historical pieces
* Modelling and simulations
* Reproduction of historical items and techniques
* Work areas also supported:
* Ancient and historic inorganic pigments and coatings
* Impact of metallurgy on society
* Highlights of aspects of study include:
* Composition and quality of raw materials
* Manufacturing processes and technique
* Evidence of use, trading, and recycling
* Relative chronology and place of origin
* Corrosion and degradation
* Stabilization and conservation treatments
* Non-invasive techniques
* Mechanical properties of materials
* Metallographic analysis as a tool for understanding the ancients’ knowledge of the material and its processing

The efforts of the Archaeometallurgy Committee concentrate on the characterization – description, analysis, and interpretation – of different types of metal artifacts to support the understanding, conservation, restoration, and preventative maintenance of historical monuments, historical infrastructures, historical artifacts, etc. The focus of the Committee is technological and historical review from an interdisciplinary context. This perspective is integral to research within the framework of more general archaeological projects.

**ASM Staff Liaisons**

David Vargas

Scott Henry

**Officers**

**Chair:** Patricia Silvana Carrizo

**Vice Chair:** David Sapiro

**Secretary:** James Churchill

**Members**

Patricia Carrizo

David Sapiro

Nassos Lazaridis

Pankaj Mehrotra

James E. Churchill

Omid Oudbashi

Peter Northover

Arsalan Ahmad

Gee Abraham

Craig Deller

Patrick Mizik

Nihad Ben Salah

Michael Sadowsky

* **Executable goals**

Publish papers in AM&P

Symposium at IMAT

Host webinars

Promotion of the Community in local chapter events

Website and social media

Think about putting together an ASM handbook on “Archaeometallurgy” Methods to accomplish goals

Upload Prospectus to Google Docs to allow review/revision

Talk to IMAT organizers to create a track or symposium

Find speakers for webinars

Coordinate events with members’ local chapters

Reach out to international metallurgical committees, societies, and universities for guidance

Tasks

* **Quantify executable goals**

# papers

1 webinar

15 talks at IMAT (5 min for track, 15-20 for symposium)

8 promoted local chapter events (post on ASM Connect)

# Frequency and content of newsletter

* **Other ideas**

Webinar with multiple speakers ~15-20 minutes talks

Webinar(s) showing archaeometallurgy in museums (basement tour)

Work with school(s) to create archaeometallurgy curriculum (example at SDSMT)

Publish comment sections to AM&P papers

* **Status/completed goals**

2 talks arranged with Notre Dame Chapter (Nassos / on January and February 2021)

1 paper for AM&P (Patricia)

1 paper for AM&P (Russel Whanhill and Omid / September)

1 paper for AM&P (Nihad / December more or less)

* A Track for this IMAT 2021 is sure possible, at least there are 6 -7 works sent by members from this Community.

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