



2013 **MRS**
FALL MEETING
& EXHIBIT

December 1–6, 2013
Boston, Massachusetts

CALL FOR PAPERS

Abstract Deadline: June 19, 2013
www.mrs.org/fall2013

REMINDER: In fairness to all potential authors,
late abstracts will not be accepted.

MRS Symposium PP: Materials Issues in Art and Archaeology X

Much of the world's cultural heritage is in peril; and many of the underlying technologies, art objects and culturally significant artifacts, buildings and sites are not being preserved. Contributions are solicited relating to cutting-edge, interdisciplinary research that provides new insights into our common cultural heritage and that leads to its long-term preservation. The preservation of cultural heritage includes developing a critical understanding of how people developed, used and transferred technologies to solve problems of survival, organization and the making of objects that represented what was important to them. Preservation also includes case studies of material and object degradation, stabilization, documentation, monitoring and conservation.

Materials research, when applied to cultural heritage, allows us to analyze and reconstruct the compositional and microstructural variability of significant objects and processes, and to measure and gain understanding of special properties and performance characteristics. We discover artists' processes, appreciate their special knowledge and sometimes find innovations, mistakes, corrections or the rate-limiting steps that bounded their practices.

The focus of this symposium is: 1) the integration of high-resolution imaging using a variety of high-precision, nondestructive techniques to learn about and understand complex objects, 2) the physical and chemical characterization of art objects and archaeological artifacts and their ranges of variability, 3) analysis and reconstruction of the technologies of selection, preparation, production, testing and performance by which materials are transformed into useful, significant and beautiful objects, 4) studies of the properties and performance of ancient objects and the processes underlying their deterioration, and 5) the development of sensors, proxies and other tools and methods for evaluation of long-term stability and testing of new methods and materials for conservation treatment.

Topics will include:

- Analysis and reconstruction of ancient and traditional technologies, especially reverse-engineered ceramic technologies
- Nondestructive, high-precision, high-resolution characterization of works of art
- New materials, especially nanomaterials, for conservation treatment
- Physical chemistry of craft processes and production of iconic visual effects
- Analysis, replication and standards to understand processes of making art objects
- Characterization and interpretation of variability: stylistic types and technological typologies
- Methods and limits of forensics and use-wear analysis in characterization
- Sensors and proxies to monitor stability of collections, materials and material interactions
- Mitigation of the effects and processes of corrosion and weathering
- Origins of modern technologies in ancient crafts
- Standardization and skeuomorphism in elite and popular technologies

Invited speakers include:

Laure Dussubieux (Field Museum, Chicago), **Robert Erdmann** (Univ. of Arizona), **Lesley D. Frame** (Cardiff Univ., United Kingdom), **Fenella G. France** (Library of Congress), **Ian C. Freestone** (Univ. College London, United Kingdom), **Keiko Fujiwara** (Nara Cultural Properties Research Inst., Japan), **Greg Hodgins** (Univ. of Arizona Radiocarbon Lab), **Jennifer Mass** (Winterthur Museum and Sculpture Gallery), **Blythe McCarthy** (Smithsonian Inst.), **Jianmin Miao** (Palace Museum, China), **Ryu Murakami** (Nara Cultural Properties Research Inst., Japan), **Alison Murray** (Queen's Univ., Canada), **Richard Newman** (Museum of Fine Arts, Boston), **Michael R. Notis** (Lehigh Univ.), **Chandra L. Reedy** (Univ. of Delaware), **Jose Luis Ruvalcaba Sil** (Univ. Nacional Autonoma de Mexico, Mexico), **Massimo Vidale** (IsMEO, Italy), **Marc Walton** (Getty Villa, Malibu).

Symposium Organizers

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