

PREFACE FROM THE GUEST EDITORS

This *Radiocarbon* issue is dedicated to the Mortar Dating International Meeting (MoDIM), which was held at Bordeaux Montaigne University (France) on 25–27 October 2018. The conference continued a 10-year-old tradition of mortar dating workshops, and was attended by 41 participants from 11 countries, including chemists, physicists, crystallographers, archaeologists, historians and geologists. Such variety of backgrounds reflects the degree of interdisciplinarity that mortar dating has reached over the years in response to the inherent heterogeneity and complexity of lime binders and silicate aggregates. In addition, an entire session of the conference was devoted to luminescence dating, which has become a complementary method in mortar dating.

The characterization of archaeological lime mortars prior to radiocarbon and luminescence dating has been the underlying theme of MoDIM. Indeed, most presentations focused on established and new methodologies aimed at identifying and removing the numerous contaminants that affect radiocarbon measurement, and at overcoming the contribution of residual geologic signals in insufficiently light-exposed materials for luminescence dating. What clearly emerged is a dire need to identify and isolate suitable calcium carbonate phases and quartz grains *prior* to dating, especially when independent age controls are not available. While the accuracy of radiocarbon measurements on aerial mortars has significantly improved, to the point that well-preserved, almost pure-calcite binders may be considered an alternative to organic materials, hydraulic mortars still prove a difficult challenge and certainly represent the next frontier. Nonetheless, these proceedings show that a thorough characterization approach based on different analytical methods can help remove the several unwanted phases that derive from different hydraulic reactions. With regard to luminescence dating, the conference confirmed that only single-grain optically stimulated luminescence may achieve accurate age determinations, provided that an estimation of the degree of bleaching of quartz grains is performed at the outset. While dating is the first application of luminescence and radiocarbon, this workshop has pointed out the contribution of these methods to our understanding of anthropogenic carbonates and their diagenetic processes over time. This could be a new theme for the next meeting.

We would like to thank all of the participants for the engaging (and challenging!) discussions and the final round table, and keynote speakers for their encompassing and foresighted perspectives, which provide the *ouverture* to this volume of proceedings. We are grateful to the members of the Organizing Committee, and in particular to Sophie Philippet, for managing the practical aspects of the meeting and leading it to the desired outcome. Many thanks go also to the students of the Master in Archaeometry at Bordeaux Montaigne University, who invested their time and effort in volunteering at the reception desk throughout the meeting. The Scientific Committee is thankfully acknowledged for reviewing conference abstracts. Special thanks to Kim Elliott and Tim Jull for managing the editorial process, and to all of the associate editors and reviewers who contributed to the scientific quality of the proceedings. Finally, we wish to thank our sponsors, which made possible the meeting and its publication: Centre National de la Recherche Scientifique (CNRS), Université Bordeaux Montaigne (UBM), Fédération des Sciences Archéologiques de Bordeaux (FSAB), Région Nouvelle Aquitaine, LaScArBx (Bordeaux Cluster of Excellence in Archaeological Science) and Kimmel Center for Archaeological Science-The Exilarch's Foundation for the Dangoor Research Accelerator Mass Spectrometer (D-REAMS) Laboratory.

We hope to see you at the next meeting!

Michael Toffolo, Elisabetta Boaretto, Rémy Chapoulie and Pierre Guibert





SPONSORS



PARTICIPANTS

Name	Affiliation
Gilberto Artioli	University of Padova
Yotam Asscher	Israel Antiquities Authority
Serena Barone	Istituto Nazionale di Fisica Nucleare – Sezione di Firenze
Gerard Barrett	Queen’s University Belfast
Elisabetta Boaretto	Weizmann Institute of Science
Frédéric Boutouille	Bordeaux Montaigne University
Marta Caroselli	University of Applied Arts and Sciences of Southern Switzerland
Rémy Chapoulie	Bordeaux Montaigne University
Justyna Czernik	Adam Mickiewicz Foundation
Mohamed Sofiane Djerad	Bordeaux Montaigne University
Jean-Pascal Dumoulin	CNRS
Pierre Guibert	CNRS and Bordeaux Montaigne University
Irka Hajdas	ETH Zürich
Jan Heinemeier	Aarhus University
Jean-Baptiste Javel	Bordeaux Montaigne University
Zuzanna Kabacińska	Poznań University of Technology
Petr Kozlovce	Institute of Theoretical and Applied Mechanics-Czech Academy of Sciences
Jean-Claude Lefevre	Claude Bernard Lyon 1 University and CNRS
Lucia Liccioli	Istituto Nazionale di Fisica Nucleare – Sezione di Firenze
Alf Lindroos	Åbo Akademi University
Fabio Marzaioli	University of Campania “Luigi Vanvitelli”
Francesco Maspero	University of Milano-Bicocca
Cyrielle Messenger	CEA Saclay
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Åsa Ringbom	Åbo Akademi University
Céline Roque	SAS Re.S.Artes
Jorge Sanjurjo-Sánchez	University of A Coruña
Michele Secco	University of Padova
Anne Schmitt	Claude Bernard Lyon 1 University and CNRS
Olga Skružná	Institute of Theoretical and Applied Mechanics-Czech Academy of Sciences
Giulia Tirelli	University of Modena and Reggio Emilia
Michael Toffolo	Bordeaux Montaigne University
Petra Urbanová	Bordeaux Montaigne University
Jan Válek	Institute of Theoretical and Applied Mechanics-Czech Academy of Sciences