

9th CrysAC workshop on
“Bio-Apatite, humans, archaeology and environment”

Department of Geosciences, University of Padova

Via G. Gradenigo 6, 35131 Padova, Italy

Tuesday, 17th September 2024

Chairs: Gilberto Artioli (*CrysAC past-Chair*), Elisabetta Boaretto (*Weizmann Institute of Science*)

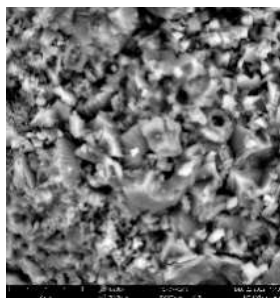
Organizing Committee: Gregorio Dal Sasso (*Consiglio Nazionale delle Ricerche CNR-IGG*), Yotam Asscher (*University of Haifa*), Lior Regev (*Weizmann Institute of Science*)

- 9.00 Opening **Gilberto Artioli**, *CrysAC past-Chair*
Elisabetta Boaretto, Chair (*Weizmann Institute of Science*)
- 9.30 - 10.00 **Daniel Harlov** (*GFZ Helmholtz Centre, Potsdam*)
“Apatite: A mineral for all seasons”
- 10.00 - 10.30 **Henrik Birkedal** (*Aarhus University, Denmark*)
“Bone apatite hierarchical structure”
- 10.30 - 11.00 DISCUSSION + BREAK
- 11.00 - 11.30 **Mailys Richard** (*CNRS, Bordeaux*)
“Investigating tooth diagenesis using cathodoluminescence, infrared spectroscopy: implication for radiometric and trapped-charge dating”
- 11:30 - 12:00 **Gregorio Dal Sasso** (*CNR-IGG*) and **Yotam Asscher** (*Haifa University*)
“Bone apatite: microstructure, crystallinity and defects”
- 12.00 - 12.15 DISCUSSION
- 12.15 - 13.30 LUNCH
- 13.30 - 14.00 **Steve Weiner** (*Weizmann Institute of Science*)
“Bone Structure and Macromolecule Preservation”
- 14.00 - 14.30 **Ina Reiche** (*C2RMF, Ministère de la Culture, Paris*)
“Apatite in museums. From ivory objects to restoration treatments”
- 14.30 - 15.00 DISCUSSION + BREAK
- 15.00 - 15.30 **Christophe Drouet** (*CNRS-University of Toulouse*)
“Bone apatite: chemical composition, structure, and synthesis of synthetic analogs”
- 15.30 - 16.00 **José Manuel Delgado-López** (*Universidad de Granada*)
Biomimetic nano-apatite: eco-friendly nanotechnology for more sustainable agricultural practices”
- 16.00 - 16.30 DISCUSSION



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“Carbonates, humans, archaeology and environment”

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- 9.00 Opening **Steve Weiner** (*Weizmann Institute of Science*)
- 9.10 - 9.40 **Emma Cantisani** (*CNR-ISPC*)
“Multi-analytic approach for evaluating the origin of calcite in ancient mortars”
- 9.40 - 10.10 **Michael Toffolo** (*Centro Nacional de Investigación sobre la Evolución Humana CENIEH*)
“Insights into the crystallinity of calcite based on Raman line widths”
- 10.10 - 10.50 DISCUSSION + BREAK
- 10.50 - 11.20 **Mariaelena Fedi** (*LABEC - Weizmann Institute of Science*)
“Dating calcite from mortars: technical aspects when dealing with very small carbon samples”
- 11:20 - 11:50 **Elisabetta Boaretto** (*Weizmann Institute of Science*)
“Carbon isotopes in archaeological carbonate: do they contribute to understanding formation processes and diagenesis”
- 11.50 - 12.15 DISCUSSION
- 12.15 - 13.30 LUNCH



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