



Working Group on Biominerals and the Environment

Report – July 2026

Working Group Board

- **Giovanni De Giudici** (Chair)
- **Kevin Rosso** (Vice Chair)
- **Juraj Majzlan** (Vice Chair)
- **Karen Hudson-Edwards** (Secretary)

Working Group Members

The Working Group currently includes colleagues from a wide range of countries and disciplines:

- Andreas Kappler (Germany)
- Juan Liu (China)
- Lucian Staicu (Slovenia)
- Francesco Di Benedetto (Italy)
- Eric van Hullebusch (France)
- Pupa Gilbert (USA)
- Jonathan Lloyd (United Kingdom)
- Łukasz Kruszewski (Poland)
- Karim Benzerara (France)
- Julie Cosmidis (United Kingdom)
- Maria Dittrich (Canada)

The WG Board and members actively contribute to promoting research on biominerals and environmental mineralogy by organizing scientific sessions, workshops, summer schools, and editorial initiatives.

During the 2022–2026 reporting period, the Working Group on Biominerals and the Environment has consolidated an active international network of researchers, promoting biomineral and environmental mineralogy through scientific sessions at major international conferences, training initiatives, workshops, and the development of collaborative and editorial projects. These activities have strengthened the visibility of the WG and fostered interdisciplinary collaboration within the mineralogical, geochemical, and environmental sciences communities.

Main Activities

- **IMA Lyon 2022** – Session: *Biominerals and Environmental Mineralogy*. Convenors: Giovanni De Giudici, Karen Hudson-Edwards, Juraj Majzlan, and Kevin Rosso.
- **EMC² Dublin 2024** – Session: *Biominerals and the Environment*. Convenors: Giovanni De Giudici, Karen Hudson-Edwards, Juraj Majzlan, and Kevin Rosso.
- **Summer School "Biominerals and the Environment"**, Italy, 5–8 September 2023 (see attached leaflet). The school attracted 25 students, with six WG members serving as instructors.
- **IAGC-3 Conference**, Cagliari, Italy, 16–21 June 2025. Organization of a dedicated session on *Biominerals and the Environment*. Conference website: <https://www.unica-wri-18.it/>
- **Workshop on Biominerals**, Tübingen, Germany, 30 June–4 July 2025.
- **IMA Nanjing 2026** –session: *Biominerals and the Environment*. Proposed convenors: Giovanni De Giudici, Jonathan Lloyd, Juan Liu, Pupa Gilbert, Juraj Majzlan, and Kevin Rosso.
- **Numerous sessions organized at national conferences**

Ongoing Activities

The Working Group is currently developing new scientific initiatives, including summer schools, workshops, symposia, and editorial projects. Current themes under discussion include (non-exhaustive list):

- Bio-inspired alternatives to cement and concrete, including microbially precipitated minerals (e.g. CaCO₃) as sustainable biomaterials.
- Sustainable mining technologies, including biometallurgy.
- Biominerals and environmental resilience.
- Biomineral-mediated stabilization of carbon in soils and sediments.
- Restoration and conservation of building materials (e.g. limestone) using biomineralization processes.

Editorial Initiatives

The Working Group is evaluating editorial opportunities to increase the visibility of the WG and promote advances in biomineral research. These include the preparation of either a comprehensive state-of-the-art review paper or a dedicated special issue in an international journal.

Over the next six months, we expect to further expand the Working Group membership and develop a detailed editorial strategy.

The WG overview is reproduced at the end of this report.

On behalf of the Working Group Board,

Giovanni De Giudici

Chair, IMA Working Group on Biominerals and the Environment

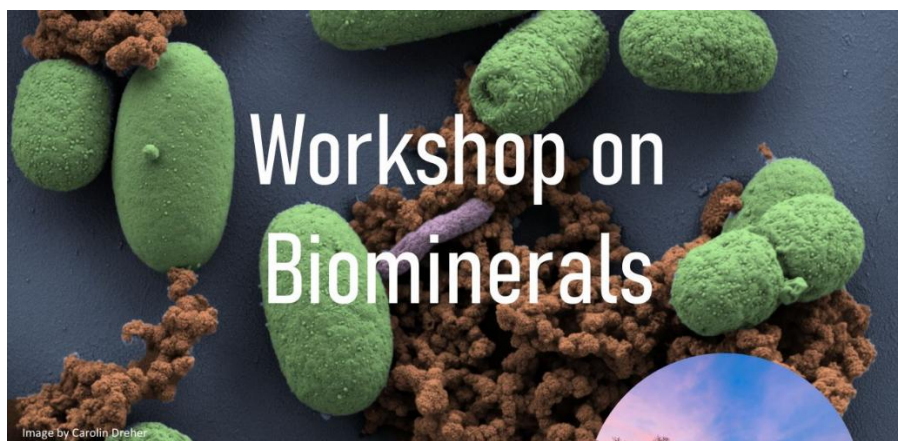
IMA Summer School 2023

Biomaterials and the Environment

Cagliari (Italy)

<https://sites.unica.it/biomaterials-and-environment/>





30 June – 04 July (2025)
University of Tuebingen
Germany

For international PhD students with interest in Geomicrobiology, Environmental Sciences and Astrobiology.

- **Renowned experts** will share their expertise in biominerals.
- Specialized hands-on **laboratory training** in biomineral characterization.
- **Field Excursion to the Black Forest** - visit historical mines showcasing **bio-stalactites with an expert guide!**

Fee: 450 EUR (includes accommodation, daily lunch, excursion and social events).

Application: Submit a 1-page **motivation letter** detailing your research interests and how the workshop will benefit your work to Prof. Andreas Kappler andreas.kappler@uni-tuebingen.de

- Only 20 spots available-

Application **deadline: May 1st, 2025**
 (or as soon as all spots are filled)

Further information on our website: <https://uni-tuebingen.de/de/84441>

