



Barrandovské semináře

JARO 2026



Seminář se koná na adrese Geologická 6, Praha 5 – Barrandov.

středa 14. 1. 2026, 14 hodin

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Decoding dolomite: microbial mastery and abiotic alchemy across time

This presentation addresses the kinetic paradox posed by Holocene dolomite by focusing on the sabkha setting: Earth's premier natural laboratory for episodic, low-temperature dolomite authigenesis. We move beyond traditional models to explore a key, cryptic process that overcomes the major kinetic barrier posed by Mg^{2+} hydration. New research, integrating cutting-edge methodologies and biogeochemical models, points to the catalytic role of certain elements, among them manganese (Mn).

Evidence suggests that active Mn cycling acts as a crucial switch—accelerating Mg^{2+} dehydration and solid solution exchange during early diagenesis. Furthermore, the cycling of Mn, via interlinked microbial respiration processes, acts as a biocatalyst, promoting classical nucleation pathways. Understanding these pathways could be essential to definitively interpret the paragenetic history of sabkha-style dolostones and confidently link early diagenetic processes to the punctuated, long-term global cycles of carbon and magnesium that define Earth's past.

Těšíme se na Vaši účast.

**Za útvar 200 ČGS
Jana Kotková**

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