

“On the labyrinthine world of open-framework minerals: occurrence, crystal-chemistry, properties and utilization”.

¹G. Diego Gatta, ¹Paolo Lotti, ²Georgia Cametti, ³David Bish

¹- Dipartimento di Scienze della Terra Università degli Studi di Milano (I), diego.gatta@unimi.it

²- Institut für Geologie, Universität Bern (CH)

³- Department of Chemistry, Indiana University (USA)

Open-framework minerals are a class of microporous materials mainly represented by zeolites, feldspathoids, clathrates and minerals with heteropolyhedral frameworks. Many of these structures hold a variety of cations and molecules within the pores in their open framework. Interest has grown over the last few decades, and there has been an explosion of studies on their occurrence, synthesis routes and properties. Both natural and synthetic varieties exist, and they represent an intersection between mineralogy and material science. The aim of this session is to assemble contributions on the occurrence, crystal-chemistry, properties and utilization of natural open-framework compounds and their synthetic counterparts, revealing any potential petrological implications and emphasizing the connections between mineralogy and materials engineering.