

Crystal Fabrics in Calcium Sulphate Deposits

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ABSTRACT

Three broad stages can be distinguished in the evolution of crystal fabrics of calcium sulphate deposits. These are: (1) the depositional phase; this includes penecontemporaneous diagenesis; (2) the burial phase, which may pass into metamorphism, and (3) the exhumation phase. The fabrics are produced by two types of processes: mechanical and chemical. Mechanical processes include growth by displacement during the depositional phase, compaction in the course of burial, and release of

overburden during exhumation. Chemical processes comprise direct precipitation of minerals from solution and mineral replacements. Both direct precipitation and replacement may operate in the depositional, burial and exhumation phases.

Recent research on present day evaporites has thrown new light on the depositional phase of some modes of evaporite formation, and this paper reviews crystal fabrics of calcium sulphate deposits against the background of current research on Recent sediments.