



MicroCT-investigation of salt growth in sandstones and limestones

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Salt damage is one of the most important threats to the European built cultural heritage. Salt crystals grow inside porous building materials like sandstones and limestones, which have been used all over Europe in monuments, cathedrals and churches. Currently a lot of effort is spent on crystal growth inhibition.

Computed X-ray microtomography (microCT) is a rapid and powerful non-destructive investigation technique that can be used to monitor weathering and restoration processes in natural building stones as it operates at pore-size resolution. Here, microCT was applied to locate the presence of salts like halite, gypsum and thenardite in laboratory specimens and in specimens from historical buildings in Belgium. Furthermore it is demonstrated how CT enables the visualisation of these salts in 3D, which is a key feature to understand their growth mechanisms.