

NANOBINDER – combining hydraulic binders and nanolime to create modular consolidants for the conservation of stone and mortar

Konrad Wolkersdörfer¹, Sabrina Horn¹, Martin Fliedner², Manfred Anders¹

1 – ZFB GmbH, Leipzig, Germany

2 – Conservator, Pöhl, Germany

Tailored consolidants are indispensable to preserve and maintain cultural heritage. We employ widely known building materials – namely lime, natural hydraulic lime and cement - to create a pool of nano-dispersions. These dispersions can be combined in any ratio to create tailored consolidants, which are tuned to the needs of the decayed material. Lab scale investigations reveal a significant potential to strengthen deteriorated structures and justify some optimism that this group of novel consolidants can be successfully applied in a realistic scenario.



Nano-dispersion works



Material documentation



demonstration object at Liebau,
Saxonia, Germany.