**Performance assessment in laboratory**

- **Stone substrates:** Carrara marble, Savonnières limestone, Maastricht limestone
- **Stone-like substrates:** Limestone, Mortar wall painting replica with fresco / egg binder / oil binder paint layer and three different sets of pigments
- **Wooden substrates:** Pine, Poplar, Linden
- **Glass substrates:** Model glasses

**Performance assessment of model samples** with and without artificial ageing in comparison to commercial products in terms of consolidation and biocide effect.

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**Synthesis of metal alkoxides**

- **Development of two alkoxide consolidant precursors:**
  - Evolving to nano-structured adherent coatings
  - Compatible with the main materials used in historic built heritage
  - Ensuring enhanced sustainability, durability and efficiency compared to conventional conservation products

**For the conservation of stone and wood:**
- Calcium alkoxide precursors of corresponding carbonate
- Alumina alkoxide precursor of $\text{Al}_2\text{O}_3$

**For the conservation of glass:**
- Aluminum alkoxide precursor of $\text{Al}_2\text{O}_3$

(Developed in EU project CONSTGLASS)

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**Performance assessment in field**

- **B. Croce Cathedral**
  - Firenze (Italy)
- **Stavropoleos Monastery**
  - Bucharest (Romania)
- **Untreaded**

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**Risk assessment & market up-scaling**

1. **Risk assessment for health & environment in relation to:**
   - Toxicity of metal alkoxide sols and solutions
   - Nano-particles exposure
   - Production of
   - Application guidelines
   - Material safety data sheet (MSDS)
2. **Industrial up-scaling:** From lab scale to pilot plant

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**Performance assessment of model samples in comparison to commercial products in terms of consolidation effect**

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**Performance assessment of historical samples**

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**Risk assessment & market up-scaling**

- **Costs/benefits analysis**
- **Market risk assessment**
- **Business plan**