

## Protective Patina for Copper Alloys

### Opportunity on offer

- Collaboration
- Consultancy and Service

### Synopsis

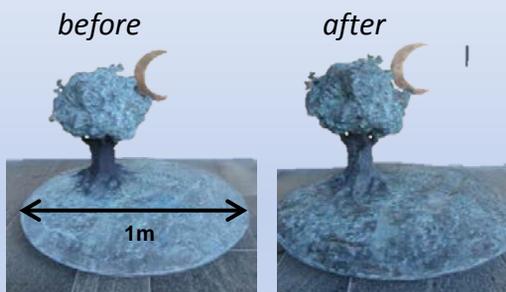
**Field-proven** method to cover copper surfaces with a **protective and durable patina**.

## Description of the Method

### □ Background

As one of the most commonly used metals throughout history up to the present day, copper is found in a vast variety of man-made objects. Durable protection of these objects against destructive corrosion poses a major problem in the conservation-restoration sector and in architecture, as well as for artists working with copper and producers of copper artefacts. Current treatment methods of copper surfaces involve organic coatings (waxes and resins) and apply toxic corrosion inhibitors.

The **sustainable and ecological** alternative on offer here relies on a fungal strain which induces formation of a **stable and protective patina** on the surface of copper and bronze objects.



### □ Main advantages

- ✓ actively **stabilising** corrosion
- ✓ the outer layer of the copper surface is converted into a **durable patina (no organic coating!)**
- ✓ **eco-friendly**
- ✓ the patina is insoluble, **preventing staining** of adjacent materials

### □ Technology and Status

The method has been successfully applied on a variety of objects including cultural heritage artefacts, copper and bronze sculptures, and monuments. The biological patina prevented further corrosive destruction of treated surfaces and preserved partially corroded artefacts.

The method can be applied to:

- protect and stabilise stained and unstained copper surfaces,
- smooth out chromatic differences on the surface of cupreous objects,
- pre-patinate copper and bronze objects,
- aesthetically patinate decorative objects.

The method is **application ready**.

### □ Offer

The treatment can be tailored to specific demands. Provision of the treatment kit, consultancy on specific applications, as well as on site applications are possible.

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