ICOMOS GA2023

31 AUGUST – 9 SEPTEMBER 2023 • SYDNEY, AUSTRALIA

HERITAGE CHANGES • #ICOMOSGA2023

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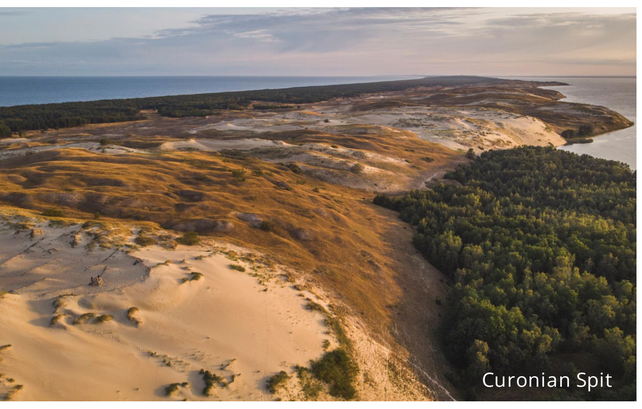
ICOMOS Lietuva

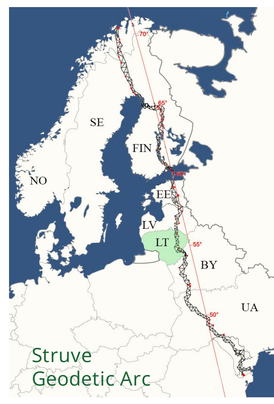
ICOMOS LITHUANIA

UNESCO WORLD HERITAGE SITES IN LITHUANIA


Curonian Spit


Vilnius Historic Centre


Kernavė Archaeological Site
(Cultural Reserve of Kernavė)



Struve Geodetic Arc

MOXY

Green Atmospheric Plasma-Generated Monoatomic Oxygen Technology for Restoration of the Works of Art

FROM SPACE TO ART:

Space science and conservation join forces to develop sustainable green technology for the contactless cleaning of the works of art

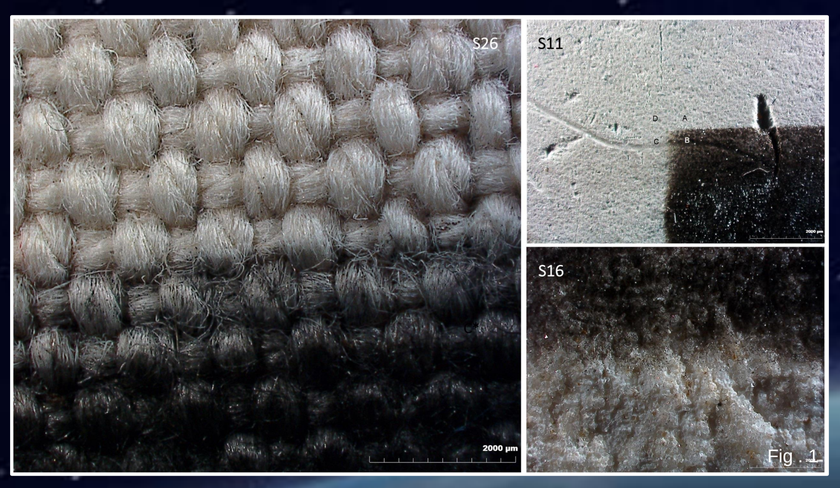


Figure 1. Detail of preliminary cleaning tests to remove carbon soot from cotton canvas (S26), plaster (S11), and sandstone (S16). Plaster S11 is labeled with four sectors: A: Control. This area was masked before soiling. B: Soiled with candle soot. C: Cleaned with atomic oxygen. D: Unsoiled area treated with AO. S11 and S16 samples show the comparison of soot-soiled areas and after treatment of AO-cleaned areas.

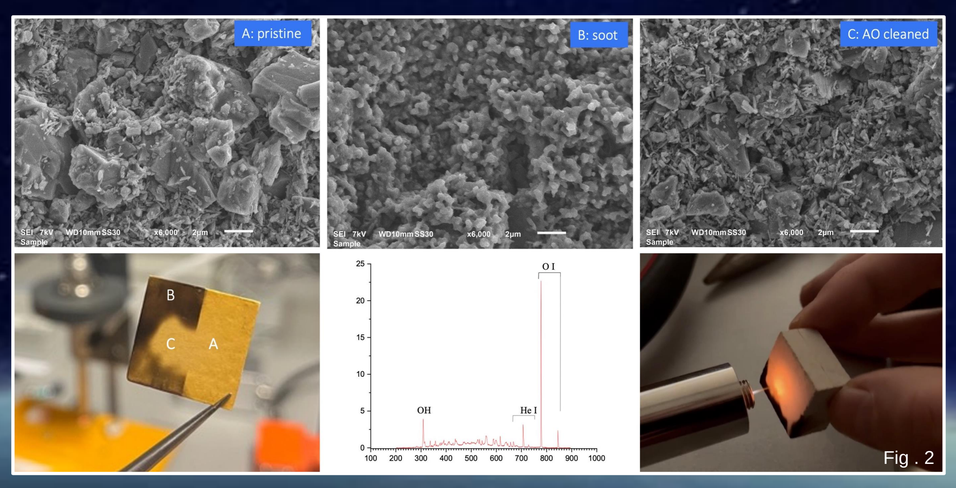


Figure 2. Testing the atmospheric AO generation prototype at Ghent University. Scanning electron microscopy SEM: paper, yellow ochre gouache paint: A-pristine, B-soiled with soot and C-cleaned. In the preliminary experiments, the cleaning pace was around 5 mm2 / 8 s. Optical emission spectrum OES shows high levels of excited atomic oxygen O (1D), essential for producing oxygen (O3P), the main cleaning agent. Lower right: AO cleaning of a soot-soiled limestone sample.

Cultural heritage plays an important role in addressing multiple global crises of our time, from climate change to political unrest, and is a societal driver of change to reduce our impact on the environment and to improve the health and working conditions of conservators while striving for ever better results. The demand for green and sustainable approaches and technologies for cultural heritage conservation has intensified in the past decade, enshrined in policy documents such as ICOM-CC's and IIC's Declaration on Environmental Guidelines (2014), the UN's Sustainable Development Goals (2015), and the European Green Deal (2019). Yet progress has been slow in creating and bringing green innovation to the bench practice.

The climate crisis, unsustainable living, and social unrest increasingly threaten tangible cultural heritage globally through the deposition of carbon-based contaminants from pollution, fires, wildfires, vandalism, and biological soiling, among others. Many porous and fragile materials cannot tolerate mechanical "wet" or "dry" cleaning using currently available methods. CH professionals increasingly encounter surfaces where soiling cannot be removed at all, especially when treating modern and contemporary artworks, fire damage, or biocontamination outbreaks.

An astounding material found in the space environment – atomic oxygen (AO) could provide a breakthrough solution and fill the gap in green and non-contact cleaning for many problematic CH surfaces from soot, hydrocarbons, and organic and biological contaminants.

In 2022, Horizon Europe funded the MOXY project (2022-2026), as part of the Green Methods for Cultural Heritage initiative. The project is coordinated by Ghent University and brings together researchers from universities, museums, NGO ICOMOS Lietuva, and small business enterprises representing seven European countries in the fields of plasma physics, engineering, heritage science, conservation, and sustainability science. The MOXY project aims to empower practitioners with a new cleaning technology to treat cultural heritage materials in a contact-free action, which converts contaminants into benign gases and vapors, forming CO2, and H20, without health or environmental concerns, or waste. MOXY's AO will open new paths to treat smoke and fire damage, vandalism, organic particle pollution, or biological contamination, and remove unwanted past conservation materials. MOXY is venturing into new territory, with many questions for which there are no answers yet. But such is the path for innovation that is heading towards something transformative.

Project consortium: Ghent University (BE), University of Amsterdam (NL), University of Antwerp (BE), National Gallery of Denmark SMK (DK), University of Pisa (IT), Eindhoven University of Technology (NL), KPV (LT), ICOMOS Lietuva (LT), Moderna Museet (SE), WeLoop (FR).

www.moxyproject.eu

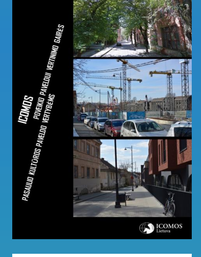
@moxy.project @project_MOXY

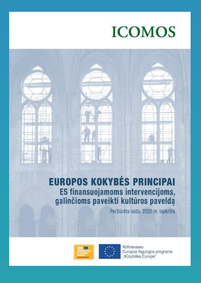
Moxy project MOXY project

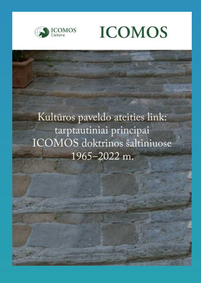
R & D: HERITAGE CONSERVATION SCIENCE – GREEN TECHNOLOGIES

FOCUS AREAS OF THE ACTIVITIES OF ICOMOS LITHUANIA

CAPACITY BUILDING AND AWARENESS RAISING







We seek capacity building in cultural heritage conservation, protection, presentation, management, resilience and sustainable use. Through knowledge dissemination, awareness raising, training, etc., we are providing the Lithuanian public newest and forward-looking international concepts and trends, worldwide practices, and expertise in heritage conservation. We are planning to launch training courses in the following years. Our target audiences include the academic community, cultural heritage professional organizations, conservators-restorers, heritage scientists, heritage managers, national and local authorities, policymakers and decision-makers the public, local communities, etc.

To promote ICOMOS doctrine and relevant source documents and make them accessible easily to the broadest national audience, we translate and publish them in a series of e-books:

2023: Toward the Future of Cultural Heritage: International Principles in ICOMOS Doctrine Sources 1965–2022
2022: European Quality Principles for EU-funded Interventions with Potential Impact upon Cultural Heritage, ICOMOS 2020
2021: ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties, ICOMOS 2011
2016: Cultural Heritage in the Contemporary World: International Principles of Cultural Heritage Protection in ICOMOS Doctrine Documents 1965–2014

EXPERT KNOWLEDGE SHARING

We focus on :

UNESCO World Cultural Heritage sites in Lithuania. These activities cover monitoring the condition of the WH sites, including the quality of conservation and sustainable use of these properties, especially of Curonian Spit and Vilnius Historic Centre; undertaking heritage impact assessments (HIAs) related mainly to planned urban change and new construction in these sites and their buffer zones; helping national and local authorities, the public and other stakeholders to understand better the issues of outstanding universal value, authenticity, and integrity of WH sites; suggesting and promoting relevant legal, cultural, economic, and public participation solutions that could strengthen management, resilience, continuity and sustainable use of WH properties in Lithuania.

National legislation. These activities include monitoring processes of drafting legislation, regulations, and policies in heritage, culture, and other fields of law, possibly impacting cultural heritage, and proposing national and local authorities to adopt amendments, which would be most beneficial for cultural heritage and communities.

Sharing ICOMOS expertise. We encourage and urge our members to join ICOMOS SCs and working groups and continuously share the gained collective knowledge and international experience with national and local audiences in Lithuania.

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Heritage Exposition

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