

AIC PAINTING SPECIALTY GROUP Webinar. Tuesday, July 15, 2025 10:00 EST

Now in its third year, the Horizon Europe MOXY Research Project (2022-2026) has developed a novel, environmentally friendly technology for generating atomic oxygen (AO) under atmospheric pressure conditions, enabling the non-contact cleaning of soot and other carbon-based soiling from sensitive cultural heritage surfaces. The experimental results are currently being analyzed and assessed to gain a deeper understanding of the AO cleaning and tailor AO for the cleaning of painted surfaces and other porous and sensitive materials.

The MOXY project is part of the EU Green Cluster for Conservation Research and Science, a group of cultural heritage conservation research initiatives that investigate innovative approaches, methods and technologies that can transform conservation into a greener practice, achieving improved and safer results for the artwork, while lowering the impact on the environment and providing safer working conditions for operators.

MOXY Senior researchers and PhD students will present talks on the AO plasma generation technology, the AO cleaning process, the practical operation of the instrument in the laboratory, the experimental application of atomic oxygen for cultural heritage materials, the analytical investigation of the interactions between atomic oxygen and cultural heritage materials, and finally some undesirable results, and unexpected new applications. A collegial open discussion and question-and-answer period will conclude the event.

Webinar program:

Opening Remarks- Bonnie Naugle, Communications & Membership Director at the American Institute for Conservation

Nina Olsson. Senior Researcher. ICOMOS-Lietuva

Introduction: The MOXY Project and the European Green Cluster for Conservation Science and Research.

Tomas Markevicius. Senior Researcher. University of Gent and University of Amsterdam

Atmospheric plasma-generated atomic oxygen tailored for cultural heritage treatment: AO generation and application for cleaning treatments

Catarina Rochas Pires. PhD student, University of Amsterdam

MOXY as an alternative non-contact cleaning tool for unvarnished, sensitive, modern paintings

Kirill Shumikhin and Cecilia Campi, PhD students, University of Pisa

Effects of Atomic Oxygen on Cultural Heritage Materials: Methodological Approaches and Challenges.

Tomas Markevicius.

Case studies and potential new areas of AO application for Cultural Heritage

Video illustration: atomic oxygen application for cleaning treatments using the MOXY prototype instrumentation in the laboratory setting

Q & A - Cristiana Ginatta. AIC PSG Chair Emerita



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