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# **367**



Metropolitan Museum of Art  
Courtesy Metropolitan Museum of Art

# TELE







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## THE MET PARTNERS WITH GREENART

The departments of Textile Conservation and Scientific Research at the Metropolitan Museum of Art have been testing GREENART's sustainable cleaning products on selected pieces from the museum's textile collection.

“Textiles offer one of the most challenging substrates to work with for an art conservator,” says Dr. Janina Poskrobko, Conservator in Charge of the Department of textile conservation at The Metropolitan Museum of Art in New York (The Met). One of the world's premier art museums, The Met manages a permanent collection of around 1.5 million objects. Its Textile conservation department, which Dr. Poskrobko oversees, cares for around 36,000 objects. Most of the challenges involved in preserving and conserving that collection relate to the inherently complex nature of the textile medium, Dr. Poskrobko says.

Textiles exhibit a richness and complexity of weave structures, fibres, textures and surface finishes, and are often diversely decorated with addition of other materials, such as metal thread, glass beads, leather or layers of *appliqué*. Textiles are often delicate and typically unsupported, so they can be a fickle substrate to work on and thus need extra attention during handling. Special care must be taken if there is a patina (or multiple patinas) which needs to be preserved. The textiles' fragility and sensitivity to light and humidity require highly sophisticated and scientifically complex protocols for storage, exhibition as well as conservation treatment. A particular cleaning method, such as gel or solvent might be effective in treating those different surfaces. One of the challenging factors in treating these complex pieces involve opening historic stitches, which makes it difficult to perform treatments from the underside. Maintaining historic integrity

is a critical choice and a tough call for conservators and curators alike that involves many discussions and analyses before a final determination is made.

“What makes a textile conservator's work even more challenging is the fact that textiles are water sensitive materials,” add Giulia Chiostrini, Met's point conservator for the GREENART International coordinating committee. “Each textile conservator must identify the nature of the material to remove before selecting the most suitable cleaning treatment. This identification is based on analysis done at the Met by research scientist Adriana Rizzo, who is collaborating with the team of conservators in the project. The analytical results inform about possible cleaning solutions and their efficacy beyond visual methods.

In the effort to promote sustainability in the field the museum's mission is to improve and use the best green conservation methodologies possible.

European Union’s GREENART project was initiated precisely to address this ubiquitous problem. The project’s goal is simply stated: to develop and bring to market sustainable products for the conservation of cultural heritage. But to achieve such a simple goal is, like the textile medium, unimaginably complex. Among the biggest complications GREENART faces is the reality that art makers follow no rules. Every item in a particular museum’s collection could be unique in its material makeup. So to be successful, GREENART must first consider the wide range of art making materials and processes, and then what products conservators are currently using to clean them. Then they must formulate replacement products that can work in a multitude of circumstances and be easily and quickly modified to adapt to variations encountered in the field. The products GREENART creates must be as good or better than whatever conservators are currently using, or the historically cautious field will be reluctant to adapt. Finally, they must qualify as being “green”, a designation for which no universally agreed upon definition exists.

The Met is one of several important international museums that agreed to test GREENART’s formulations on the irreplaceable objects in their collections. GREENART’s methodology, meanwhile, is not to simply ask these institutions to test whatever formulations the project’s scientists are already developing. Rather, they ask the museums to bring them their most complicated conservation problems. GREENART’s scientists then send specific formulations engineered for those scenarios for the conservators to test.

As Giulia Chiostrini has explained, The Met’s conservation team

decided to focus their testing on textiles because even within the already complex realm of art making, the textile medium is one of the most diverse. In addition, there is a philosophical debate that frequently arises in the textile conservation field that renders conservation even more nuanced. The issue is whether conservation or repair of a particular textile might jeopardise the historical or aesthetic value of the work. “We must collaborate with curators and exchange information about the technical aspects of the textile under discussion as well as its cultural context. For example, following our discussion we agree that a wax deposit on an ecclesiastic vestment is representative of the original artwork’s function. As a result, the deposit on the vestment will not be removed exemplifying our understanding that the identity of the artefact is of primary importance. So again, the secret is to find solutions that address the complex world of textiles. The nanotechnology approach seems to be promising in achieving both: new and green methodologies.”

The Met has been working with GREENART’s Work Package #2, the one presenting cleaning nano gels products. Among those, the Met team has tested GREENART’s microemulsions, hydrogels as well as organogels. “First of all, just the fact that they can provide new, more sustainable solutions that we can experiment with in different ways was important.” “We can add water or different solvents. It is a new paradigm that we are interested in investing our time in, to find more consistent and effective local cleaning solutions that are different from the traditional gel applications.” The goal is to find what is going to be the most versatile. “We also want to know what we can treat *in situ*, right in the gallery,” she says.

“Conservators are all about making the treatment faster and smoother. So the practicality of using one single gel on a three dimensional object without moving it would be a significant improvement.”

Like the project’s other museum partners, the Met’s conservation team is meanwhile engaged in a back and forth with GREENART’s scientists, with conservators providing specific feedback about how well the formulations are performing; and GREENART modifying their formulations so they can be tested again and further improved. “Last December we had the first meeting,” Chiostrini says. “We discussed our case studies and they gave us some suggestions. We shared our opinions and offered honest assessments about what does and does not work. Our approach is always collaborative with the goal of improving and refining our current practices. Importantly, our feedback is valued — it is a true partnership in the development and testing of new formulations.

“Eventually, says D’ Poskrobko. There is still much more testing to be done before these products are available on the market. We are satisfied with the results we have attained to date. The Met, the institution we represent, is committed to the development of the best sustainability solutions and practices and supports this joint endeavour. We are proud to contribute to GREENART’s goals and Met’s Strategic Plan goals of improving environmental sustainability, in collaboration with a team of renowned scientists and conservators. We have learned a great deal and will continue to expand our knowledge in our association with this exciting research”.





D<sup>r</sup> Janina Poskrobko testing Hydrogels on a velvet panel

Courtesy Metropolitan Museum of Art

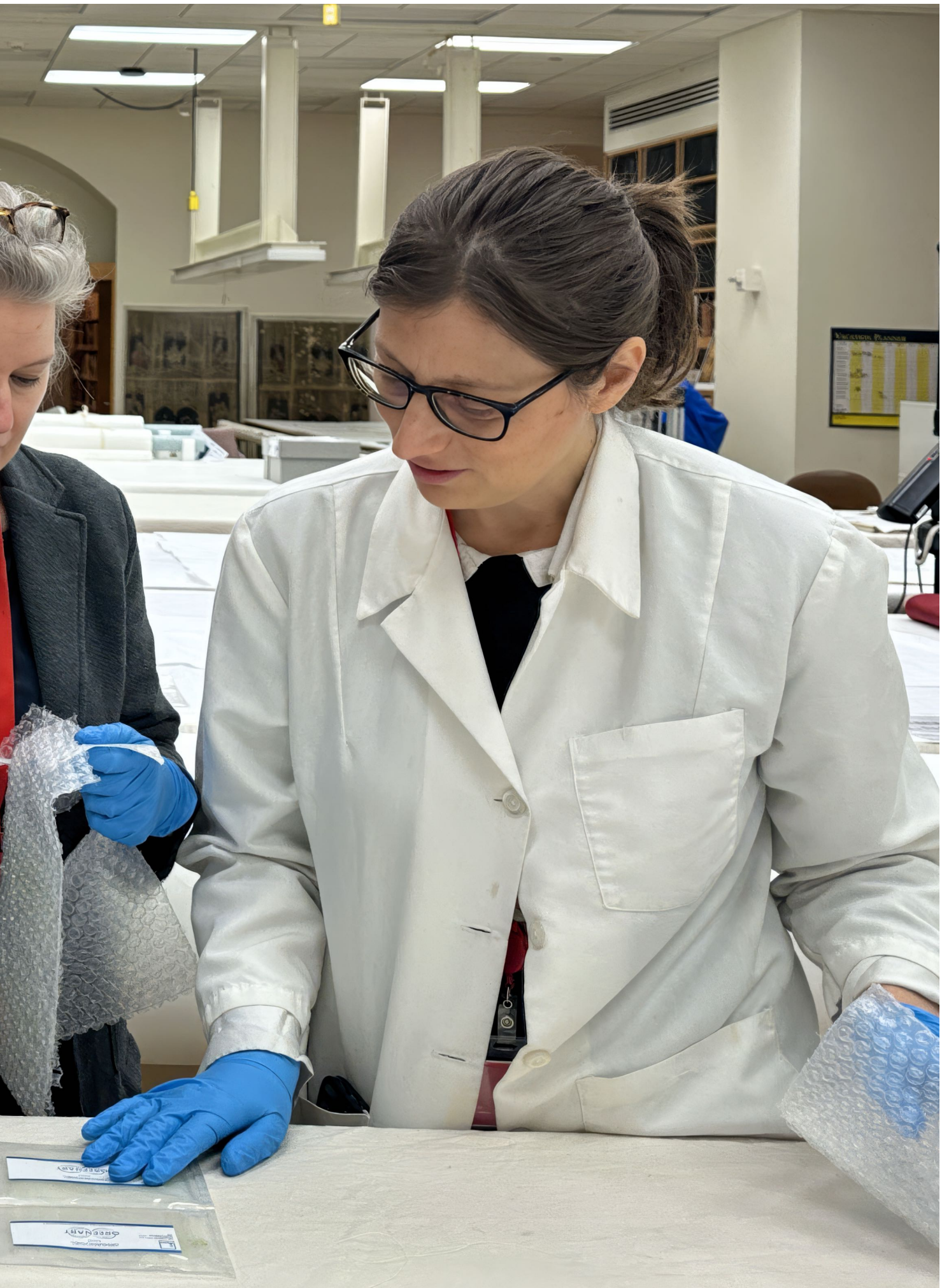




D<sup>r</sup> Janina Poskrobko, Giulia Chiostrini and Adriana Rizzo

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