



**Ricerca, Trasferimento Tecnologico e Recruiting al distretto Navile:
dipartimenti di Chimica, di Chimica Industriale e di Farmacia e Biotecnologie**

**Green Innovation in Cultural Heritage Restoration: Electrospun Materials
as Smart Carriers for Sustainable Cleaning**

Silvia Prati

G. Sciutto, C. Gualandi, F. Ramacciotti, M.L. Focarete, S. Prati, R. Mazzeo,
TESSUTO PER LA PULIZIA DI OPERE D'ARTE
App Num: EP2022/071159, Pub Num: WO2023006859A1, Pub Date: 2023-02-02

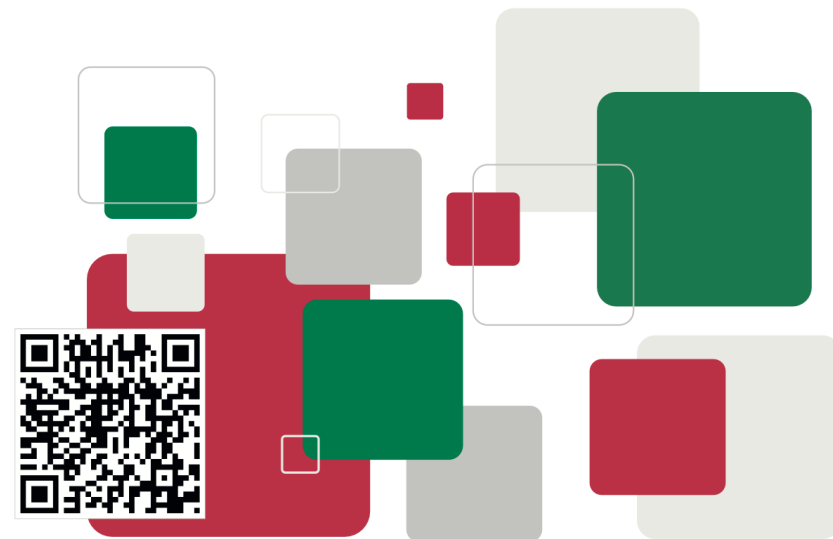


Figura 1a. Beni iscritti nella Lista del patrimonio mondiale Unesco per categoria e paese (primi 20 paesi per numero di beni iscritti). Anno 2022. Valori assoluti

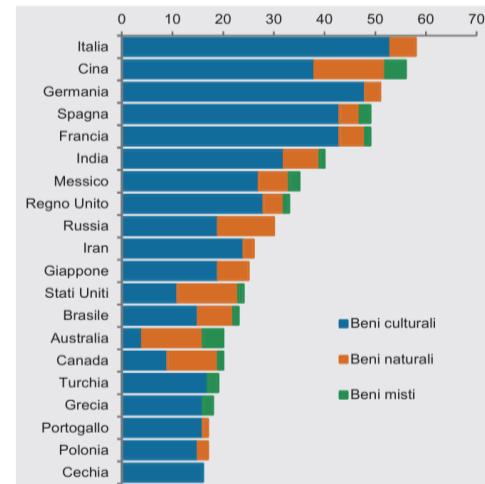
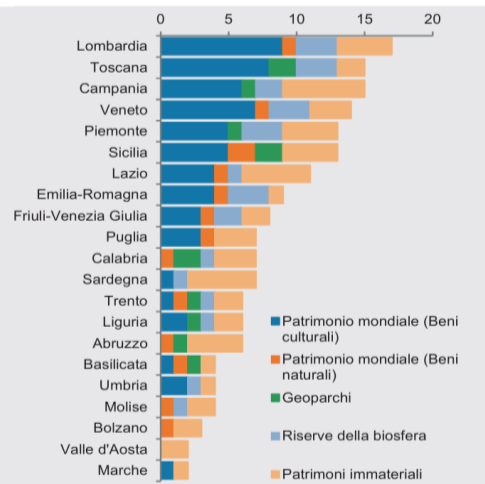


Figura 1b. Beni iscritti nella Lista del patrimonio mondiale per categoria e altri elementi riconosciuti dall'Unesco, per regione (a). Anno 2022. Valori assoluti



Fonte: Istat, Elaborazione su dati Unesco

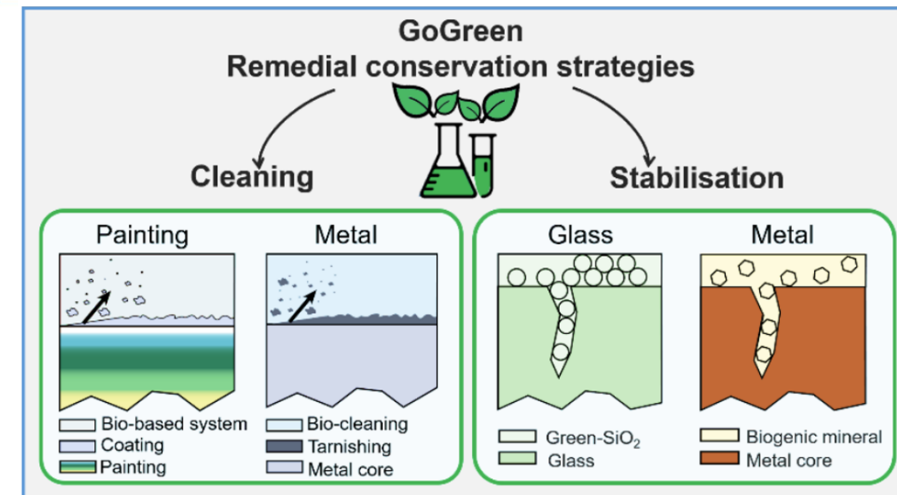
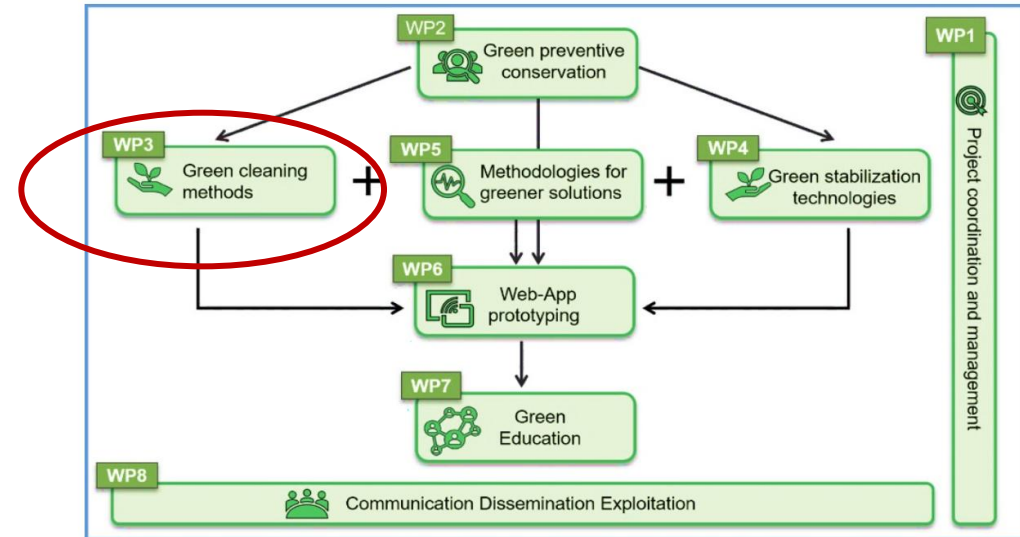
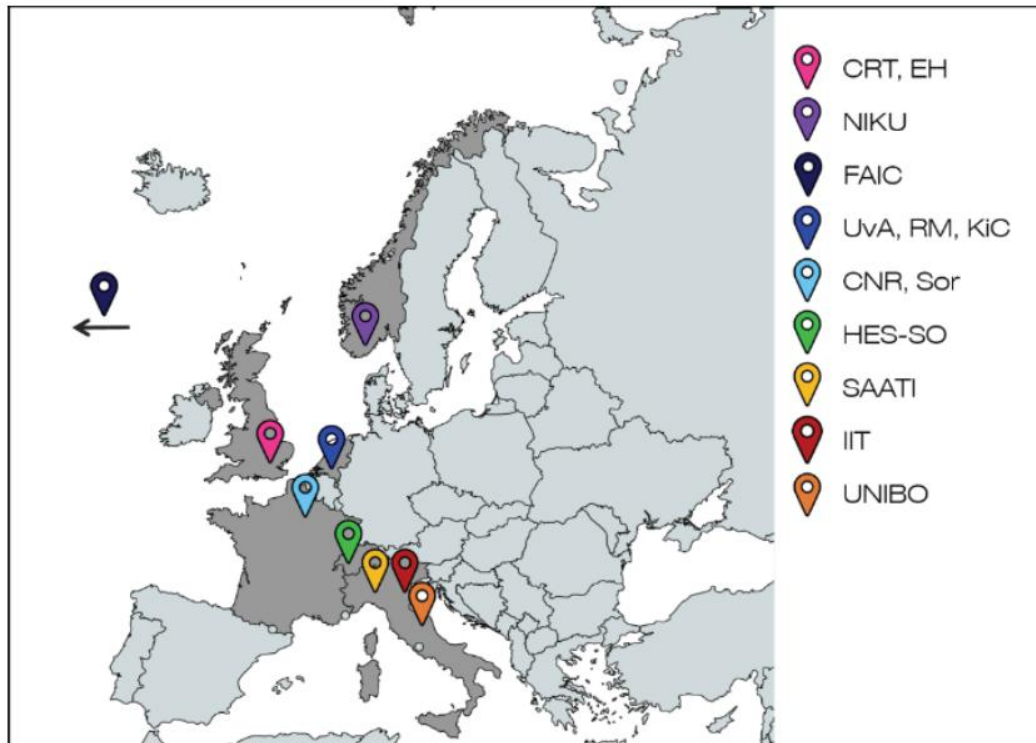
(a) Gli elementi localizzati in più regioni sono contati più volte. Due Patrimoni immateriali non localizzati in un territorio specifico (Arte della Falconeria e

«Dai dati di bilancio del Dipartimento della Ragioneria Generale dello Stato emerge che il valore del patrimonio italiano è di almeno 986 miliardi di euro tra attività finanziarie e non finanziarie. Solo le opere d'arte classificate come beni mobili di valore culturale, biblioteche e archivi valgono 174 miliardi di euro (il **10,4% del nostro Pil**) .»



GREEN STRATEGIES TO CONSERVE THE PAST AND PRESERVE THE FUTURE OF CULTURAL HERITAGE

COORDINATED BY K. Keune, University of Amsterdam



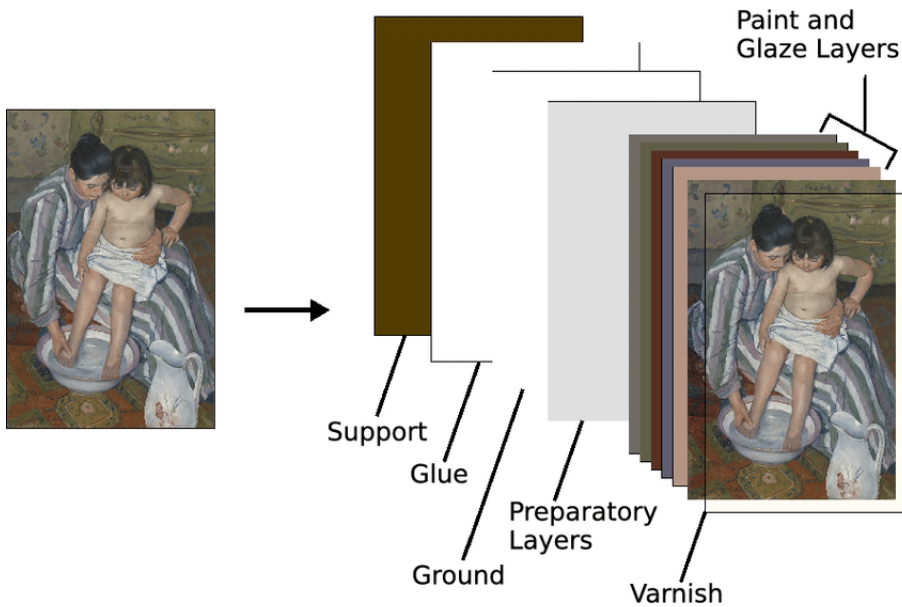
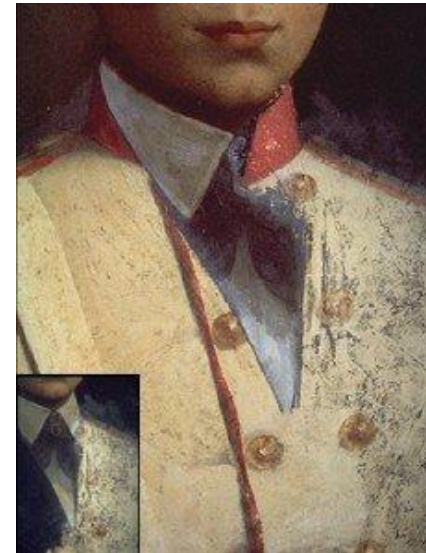
CLEANING OF CULTURAL HERITAGE

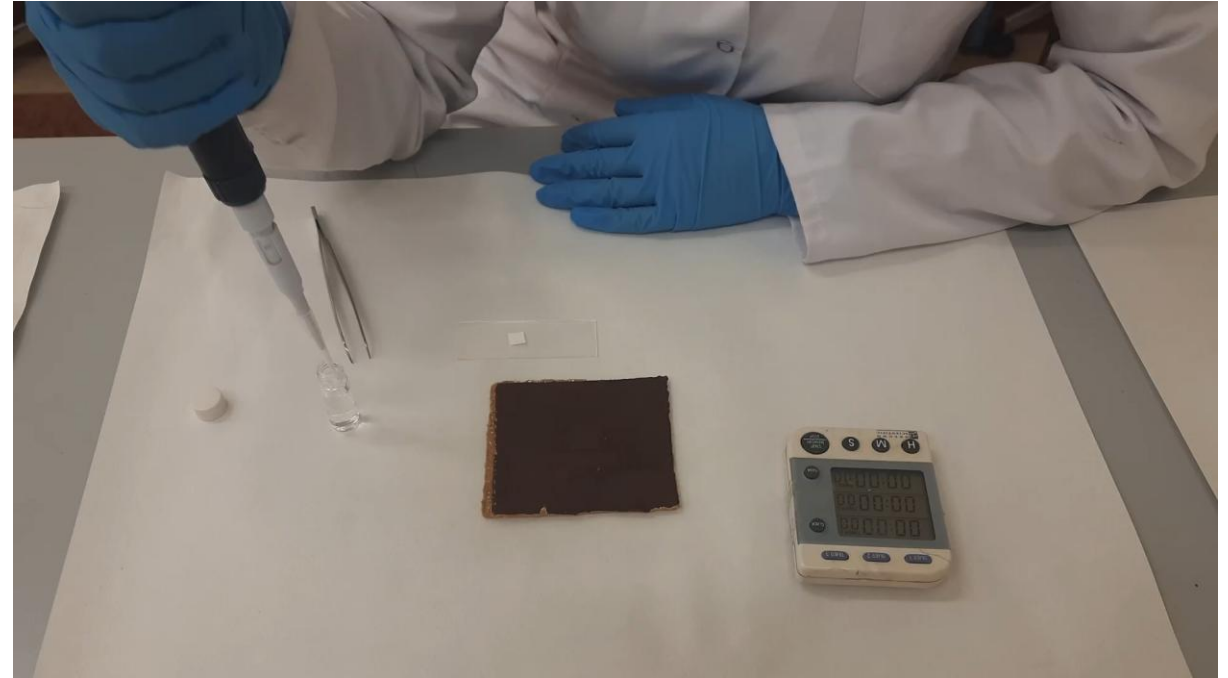
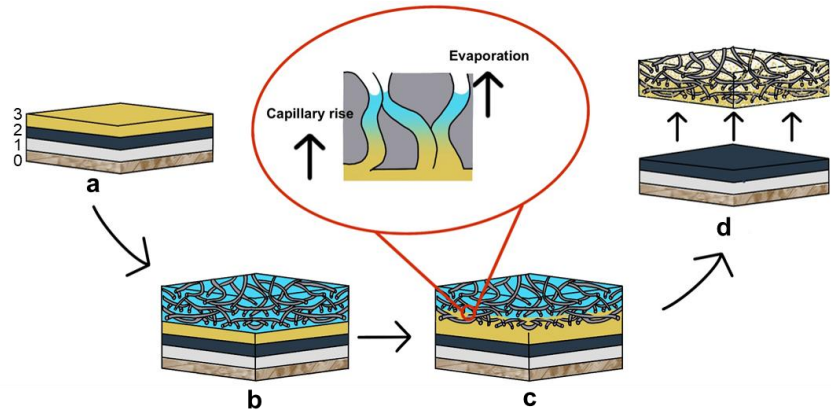
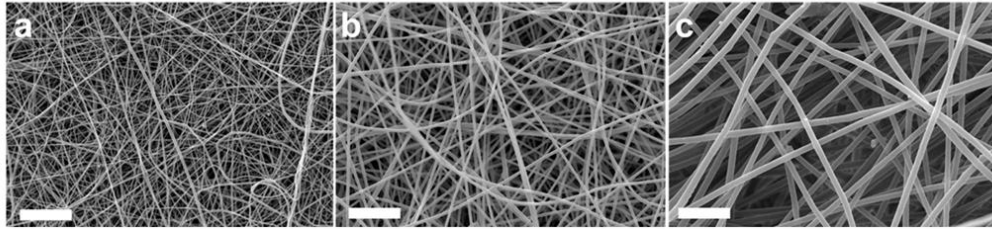
Removing aged varnishes or deposition



Removing a vandalic act

Removing a repainting



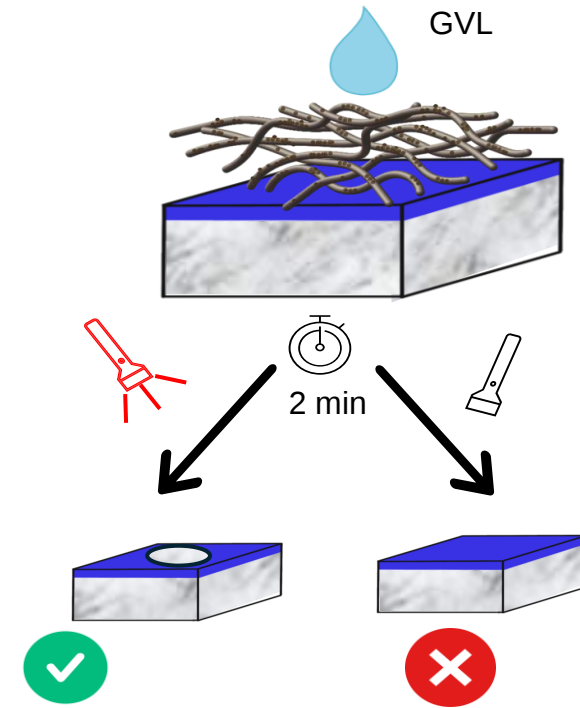
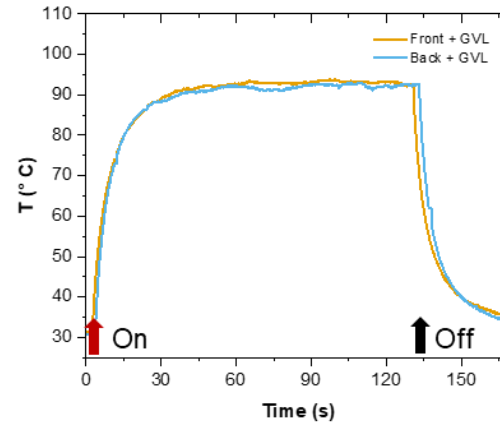
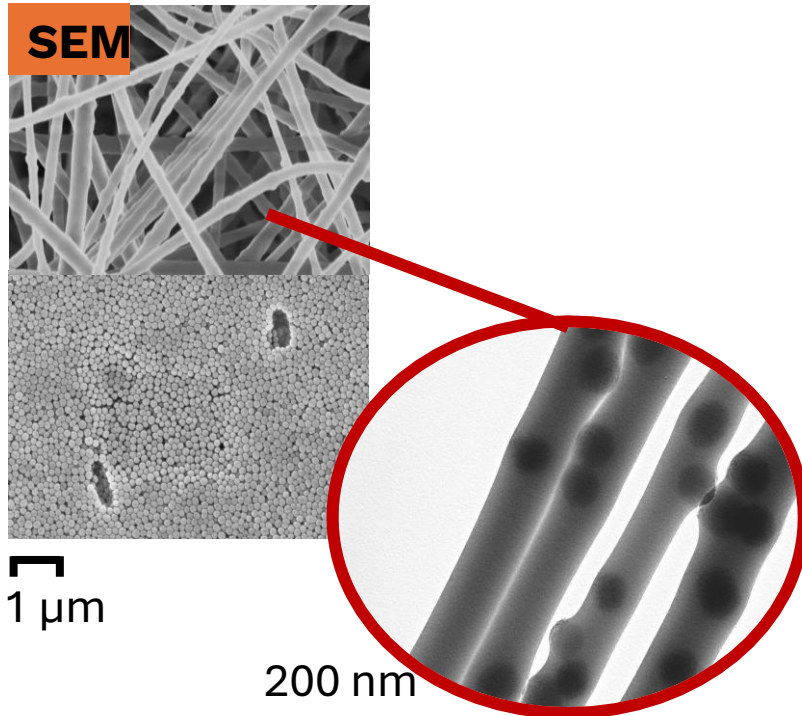


0. Support 1. Ground layer 2. Paint layer 3. Varnish



Francesca Ramacciotti, Giorgia Sciutto, Laure Cazals, Denise Biagini, Serena Reale, Ilaria Degano, Maria Letizia Focarete, Rocco Mazzeo, Mathieu Thoury, Loïc Bertrand, Chiara Gualandi*, Silvia Prati*, "Microporous electrospun nonwoven combined with green solvents for the selective peel-off of thin coatings from painting surfaces", Journal of Colloid and Interface Science, 663, p. 869 – 879, 2024.c

ELECTROSPUN MATS FOR REMOVING VANDALIC ACTS FORM URBAN ART



Irradiation conditions:

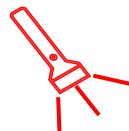
- LED-sample distance: 6 cm
- Intensity: 0.3A
- Temperature reached: 65 $^{\circ}\text{C}$
- Application time: 2 minutes



ES+ photothermal +GVL,
irradiated 2 min



ES+ photothermal +GVL, not
irradiated 2 min



SILVIA PRATI
s.prati@unibo.it

<https://site.unibo.it/chemistry-cultural-heritage/en>
<https://corsi.unibo.it/2cycle/ScienceForConservation>



<https://gogreenconservation.eu/>

Thank you for the attention



SCAN ME