



International Conference

## NANOmaterials for the RESToration of works of ART

29-30<sup>th</sup> November 2018, Copenhagen

Within the EU Horizon 2020 NANORESTART research project, new materials and treatment methods based on nanotechnology have been developed and tested. NANORESTART systems may provide several advantages over conventional products, particularly in terms of flexibility (application to different types of substrates), performance, efficiency, retreatability, selectivity and sensitivity of conservation treatments.



Five product families and fifteen key Product Solutions have been selected as cleaning systems for cultural heritage, surface consolidation of fibrous materials, coatings to protect metal and plastic surfaces, and sensing and diagnostic systems for degradation products.

The Conference will provide a unique opportunity to be informed about the specific research strands of the project, to attend sessions on key product demonstrators, and to network with researchers, producers, museums, conservators and scientific organizations that are partners of the project.

**Project website:** [www.nanorestart.eu](http://www.nanorestart.eu)

**Conference Venue:** National Museum of Denmark, Copenhagen

**Registration fee:** conference fee of 100 euro, including coffee breaks and lunch

**Information and registration:** write to [nanorestart.conference@natmus.dk](mailto:nanorestart.conference@natmus.dk)



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## NANORESTART Conference Program

<b>THURSDAY, November 29, 2018</b>	
9:00 – 9:10	Welcome
<b>Session 1: New tools for cleaning</b>	
9:10 – 9:50	Keynote presentation – Professor Piero Baglioni, Director of National Consortium for Nanosystems (CSGI), University of Florence <b>New gels and complex fluids to clean modern and contemporary art</b>
9:50 – 10:15	<b>Aqueous cleaning of sensitive modern and contemporary painted surfaces using tailored Peggy series gels: two case studies from Tate’s collection</b> B. Ormsby, A. Bartolletti, R. Barker, T. Maor, R. Mastrangelo, N. Bonelli, D. Chelazzi, P. Baglioni
10:15 – 10:45	COFFEE/POSTERS/PRODUCT SHOWCASE
10:45 – 11:10	<b>Peggy gels for the removal of surface dirt and not original varnishes on 20th century paintings</b> L. Pensabene, M. Petruzzellis, D. Chelazzi, R. Giorgi, P. Baglioni
11:10 – 11:35	<b>Two innovative methods for safe and efficient removal of pressure sensitive adhesive tapes</b> A. Mirabile, P. Baglioni, R. Giorgi
11:35 – 12:00	<b>Evaluation of Nanostructured Cleaning Systems for Contemporary Paper</b> E. González Arteaga, M. Martín Gil, E. Sánchez Alonso, I. Lozano de Gregorio, A. Ros Tgores
<b>Session 2: Surface consolidation systems for conservation of fibrous materials</b>	
12:00 – 12:25	<b>How combined nanomaterials provide adequate consolidation for degraded canvas</b> K. Kolman, O. Nechyporchuk, M. Persson, K. Holmberg, R. Bordes
12:25 – 12:50	<b>A new multiscale approach to the assessment of nanocellulose consolidants for painting canvases</b> A. Bridarolli, M. Odlyha, O. Nechyporchuk, K. Holmberg, A. Nualart-Torroja, C. Ruiz-Recasens, M. Anders, A. Chevalier, R. Bordes, L. Bozec
12:50 – 13:50	LUNCH
13:50 – 14:15	<b>Novel nanomaterials to consolidate the canvas support of paintings assessed from the conservator’s point of view</b> M. Oriola, G. Campo, C. Ruiz-Recasens, A. Nualart-Torroja
14:15 – 14:40	<b>New treatments for canvas consolidation and conservation</b> M. Anders
<b>Session 3: Coatings for the protection of plastic surfaces</b>	
14:40 – 15:05	<b>Protective coatings for plastic works of art</b> A. Chevalier, C. Coon, S. Cros, M. Hidalgo, M. Lazzari, M. Arturo López-Quintela, M. Mihelčič, E. Semenzin, Y. Shashoua, M. Strlic, A. K. Surca

15:05 – 15: 35	COFFEE/POSTERS/PRODUCT SHOWCASE
<b>Session 4: Coatings for the protection of metal surfaces</b>	
15:35 – 16:00	<b>New strategies to develop active polymer nanocomposite coatings for the protection of contemporary works of art based on metals</b> L. Ambrosio, M. Anders, P. Baglioni, A. Bianchin, R. Bordes, GG. Buonocore, P. Buratti, D. Chelazzi, G. Di Carlo, E. Forlin, R. Giorgi, C. Giuliani, G.M. Ingo, S. Lanuti, M. Lavorgna, C. Palandri, L. Pensabene, M. Salzano de Luna, H.S. Schrekker, E. Badetti
16:00 – 16:25	<b>The role of passive coatings in multilayered systems for the long-term protection of outdoor metal artefacts</b> M. Anders, P. Buratti, S. Cros, G. Di Carlo, C. Giuliani, M. Hidalgo, G.M. Ingo, S. Lanuti, M. Lavorgna, M. Mihelčič, C. Palandri, L. Pensabene, M. Salzano de Luna, K. Schuhmann, E. Semenzin, A.K. Surca
<b>FRIDAY, November 30, 2018</b>	
<b>Session 5: Sensing and diagnostic systems for detection of degradation products</b>	
9:15 – 9:40	<b>Surface Enhanced Raman Spectroscopy (SERS) Investigation of Dyes in Fellini's Felt-tip Pens</b> D. Saviello, M. Trabace, A. Mirabile, R. Giorgi, P. Baglioni, D. Iacopino
9:40 – 10:05	<b>Detection of degradation markers from plastic artworks by SERS</b> M. Lazzari, M. Gómez, D. Reggio
10:05 – 10:30	<b>Gas Sensors for Voltammetric Detection of Selected Volatile Organic Compounds</b> S. B. Hočevár, P. Jovanovič, V. Jovanovski
10:30 – 11:00	COFFEE/POSTERS/PRODUCT SHOWCASE
<b>Session 6: Environmental impact assessment</b>	
11:00 – 11:25	<b>Safe by Design: supporting the development of safe and sustainable nano-enabled products for the restoration of works of art</b> E. Semenzin, E. Giubilato, E. Badetti, M. Picone, D. Hristozov, A. Brunelli, A. Bonetto, V. Cazzagon, A. V. Ghirardini, A. Marcomini
<b>Session 7: Use, application and exploitation of NanoRestart product solutions</b>	
11:25 – 11:45	<b>Opportunities and challenges for exploitation of NANORESTART product solutions by the cultural heritage community and beyond</b> A. Porcari, D. Pimponi, E. Forlin, A. Bianchin, E. Giubilato, A. Marcomini, D. Chelazzi, R. Giorgi, P. Baglioni
11:45 – 13:00	Showcase and demonstration of Nanorestart product solutions
13:00 – 14:00	LUNCH/POSTERS/PRODUCT SHOWCASE
14:00 – 15:00	Panel discussion: viable business models for broad use and application of products by cultural heritage professionals, museums, scientific organizations, companies and others
15:00	Closing remarks