

Antimicrobial Nanocoatings: Aligning Innovation, Regulatory Compliance and Market Uptake



RELIANCE



Thursday, 7 May 2026 (part of SICT2026), Prague
11 am - 5:30 pm

Session I: Smart Material Design & Antimicrobial Functionality

- 11:05 - 11:20 Controlled-release of carvacrol oil from stimuli-responsive copper-doped mesoporous silica particles
- 11:20 - 11:35 Antibacterial Performance of Nanoparticle-Based Coatings on Textile
- 11:35 - 11:50 Photoactive Nanoparticles for Antimicrobial Therapy
- 11:50 - 12:05 Encapsulation of Essential Oils in Silica Nanopores: A Molecular Dynamics Simulation Study
- 12:05 - 12:20 Q & A

12:20 - 14:00 Lunch Break

Session II: Validation & Performance on Real Surfaces

- 14:00 - 14:15 A Safety-By-Design Approach for Hazard Evaluation of Bio-Based Self-Disinfecting Nano-Coatings
- 14:15 - 14:30 Particle Release from Light-Activated Antimicrobial Coatings under Simulated Dermal Contact and Cleaning
- 14:30 - 14:45 A decorative and antibacterial coating for high-traffic objects: effectiveness and durability after testing in a real-life-like scenario
- 14:45 - 15:00 Q & A

Session III: From Lab to Scale & Compliance

- 15:00 - 15:15 From Laboratory Development to Industrial Upscaling of Sputtered Antimicrobial Coatings
- 15:15 - 15:30 Developing methods to generate realistic efficacy data for antimicrobial surfaces
- 15:30 - 15:45 Atmospheric plasma-assisted deposition of antimicrobial coatings on complex 3D automotive interior surfaces
- 15:45 - 16:00 Q & A

16:00 - 16:20 Coffee Break

Session IV: The Future: Aligning Research, Regulation & Sustainability

16:20 - 17:20 Moderated interactive roundtable with 3 thematic areas:

- I. Predictive & Digital Design
- II. Safety, SSbD & Environmental Impact
- III. Industrial Deployment & Standardisation