

RSC Applied Interfaces

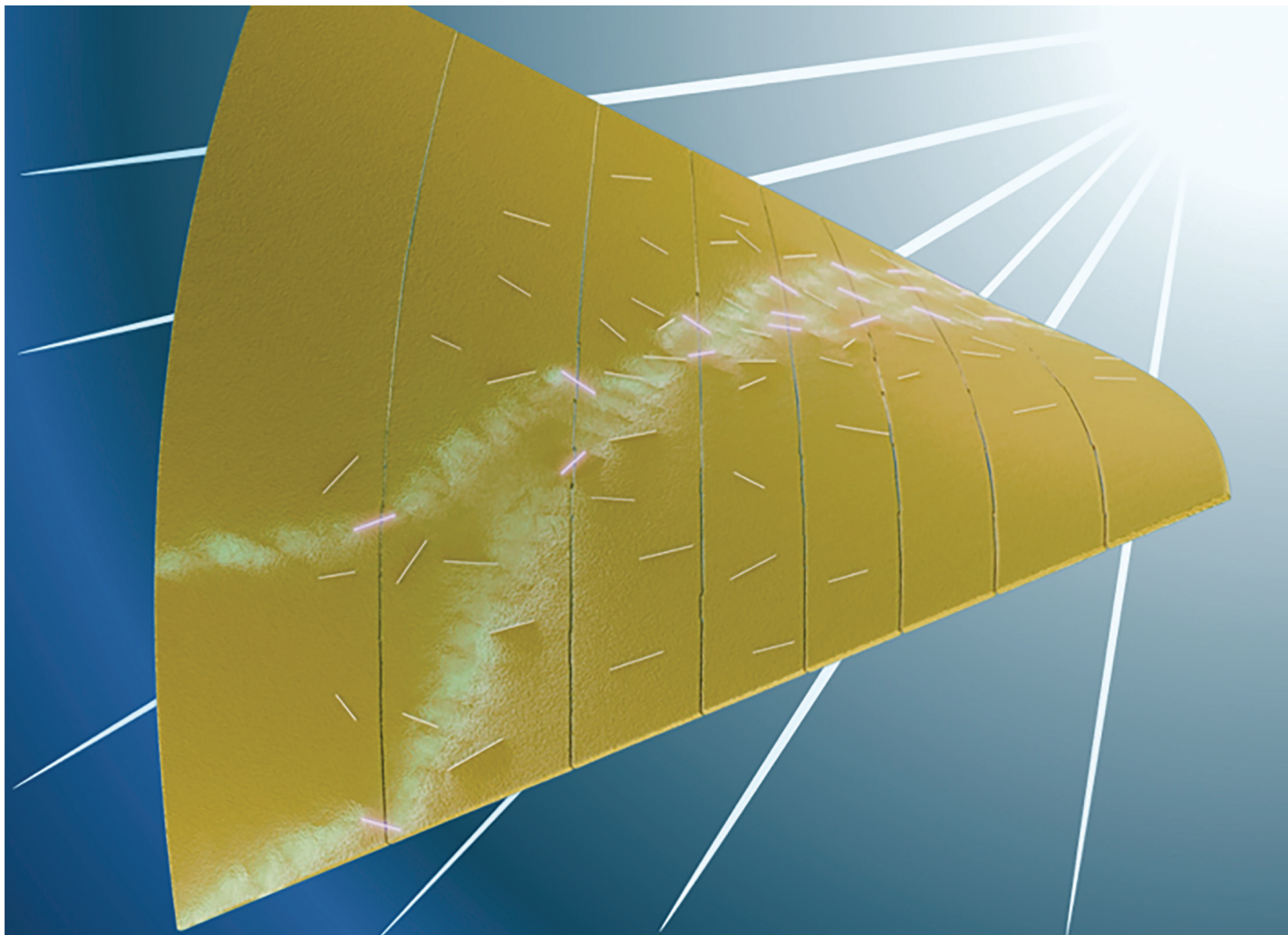
GOLD
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**Interfacial and surface research
with an applied focus**

Interdisciplinary and open access

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**Fundamental questions
Elemental answers**



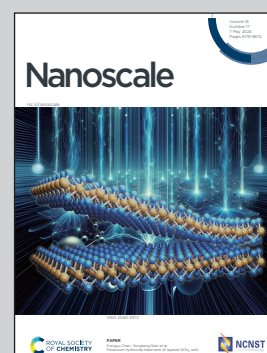
Showcasing research from the laboratory of Solid-state Physics - Interfaces and Nanostructures, University of Liège, Liège, Belgium.

Bridge percolation: electrical connectivity of discontinued conducting slabs by metallic nanowires

This artistic cover, created by the architecture firm N8, illustrates the original concept of bridge percolation, which highlights the possibility of using very sparse silver nanowire networks on fractured conducting thin films to achieve low-resistance composite materials with minimal cost. Using analytical derivations, Monte Carlo simulations, and circuit modelling, the different scaling behaviours of the system in terms of physical parameters (network density, nanowire length and cracks interdistance) are explored, offering potential advancements in transparent conducting materials.

Image produced by permission of Luan Nguyen (BUREAU D'ARCHITECTURE N8).

As featured in:



See A. Baret, N. D. Nguyen *et al.*, *Nanoscale*, 2024, **16**, 8361.