

# RSC Sustainability

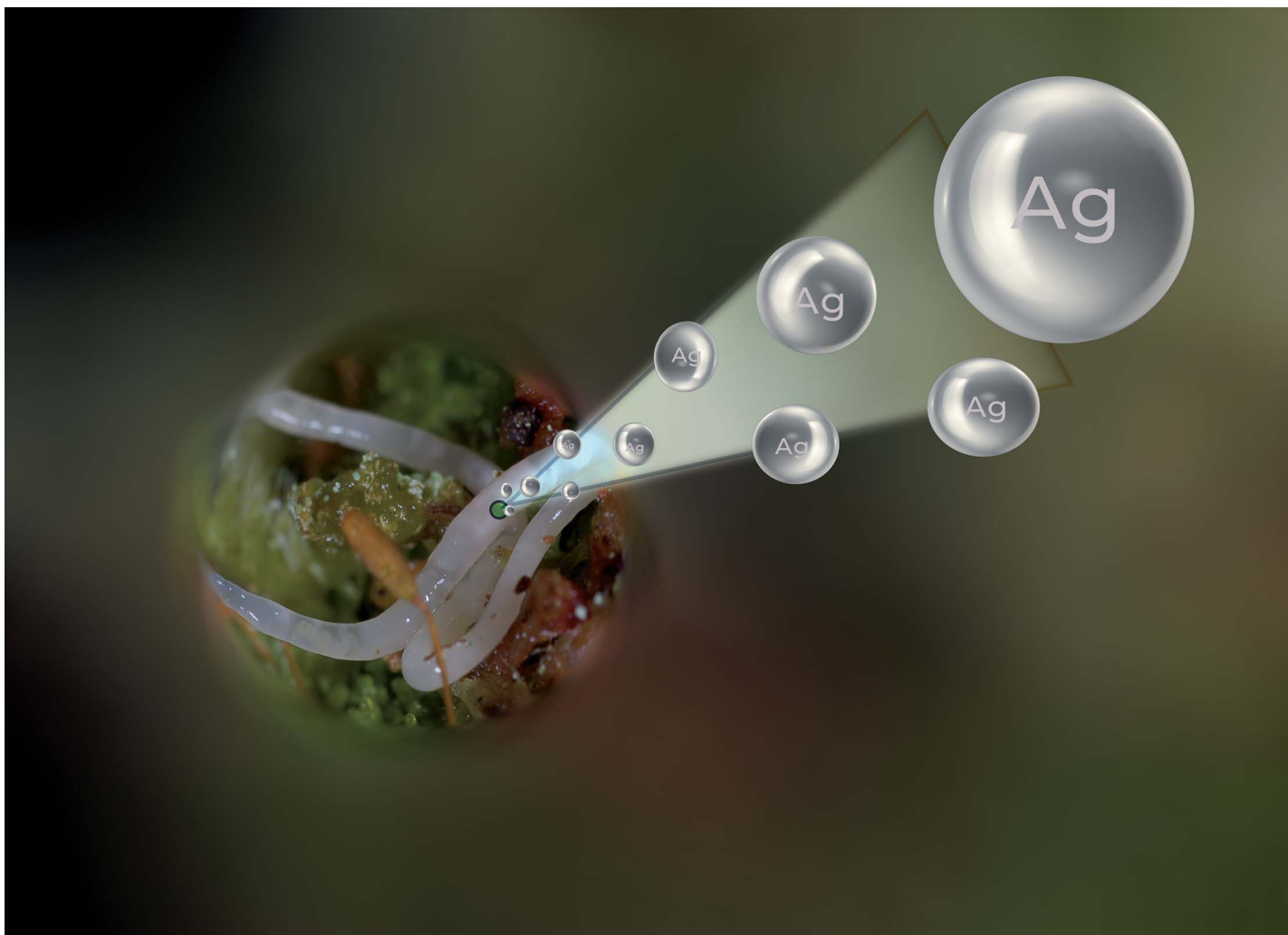
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Fundamental questions  
Elemental answers



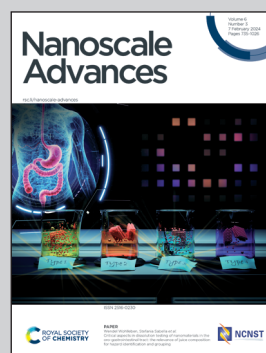
Showcasing research from the Universities of Aveiro (Portugal), Aarhus (Denmark) and VU Amsterdam (The Netherlands), from Amorim, Soares, Scott-Fordsmand and Van Gestel laboratories.

Multigenerational exposure of Ag materials (nano and salt) in soil – environmental hazards in *Enchytraeus crypticus* (Oligochaeta)

This important collaborative effort allowed us to understand the mechanisms of Ag nanomaterial uptake in soil invertebrates (*Enchytraeus crypticus*, Oligochaeta) over multiple generations (exposure for 7 generations, 224 days). Detoxification occurred at the cost of a decrease in reproduction, after a maximum Ag uptake in the second generation. The organisms were able to recover after being transferred to clean soil. In nature, organisms are always exposed over many generations, but such studies are scarce, especially for organisms in soil, which is the major sink for nanomaterials, especially Ag via sewage sludge.

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### As featured in:



See Mónica J. B. Amorim *et al.*, *Nanoscale Adv.*, 2024, 6, 826.