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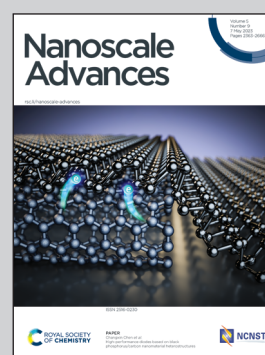


Showcasing research from Professor Pikramenou and Dr. Blair's laboratories, School of Chemistry and Institute of Microbiology and Infection at University of Birmingham, Edgbaston, UK.

Chelating silica nanoparticles for efficient antibiotic delivery and particle imaging in Gram-negative bacteria

Nanoparticles with encapsulated antibiotics are delivered in Gram-negative bacteria using surface modification of the nanoparticles. Aminocarboxylate ligands are used to decorate the nanoparticle surface and allow penetration of nanoparticles into Gram-negative bacteria, with demonstrated activity of vancomycin which is inactive on its own. The particles are detected in bacteria by structural illumination microscopy monitoring the red luminescence of a ruthenium co-encapsulated probe.

As featured in:



See Jessica M. A. Blair, Zoe Pikramenou *et al.*, *Nanoscale Adv.*, 2023, 5, 2453.