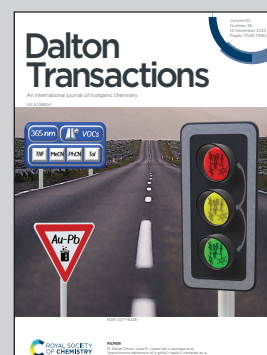


Showcasing research from Professor Shouhu Xuan's laboratory, CAS Key Laboratory of Mechanical Behavior and Design of Materials, Department of Modern Mechanics, University of Science and Technology of China, Hefei 230027, PR China.

Size-dependent magnetomechanically enhanced photothermal antibacterial effect of  $\text{Fe}_3\text{O}_4@\text{Au}/\text{PDA}$  nanodurium

A novel  $\text{Fe}_3\text{O}_4@\text{Au}/\text{PDA}$  nanodurium with spiky surfaces has been fabricated, demonstrating excellent photothermal and magnetomechanic coupling antibacterial behavior. The photothermal antibacterial performance can be significantly improved under the application of a rotating magnetic field. These findings emphasize the importance of particle size in the magnetomechanic effects, offering potential solutions for combating antibiotic resistance in clinical applications.

### As featured in:



See Yi Zhu, Xinglong Gong, Shouhu Xuan *et al.*, *Dalton Trans.*, 2023, 52, 17148.