

Antibacterial/Magnetic Iron Oxide Nanoparticles: A Comprehensive Review of Synthesis Methods, Doping Effects, Antibacterial Properties, and Applications in Medical and Food Industries

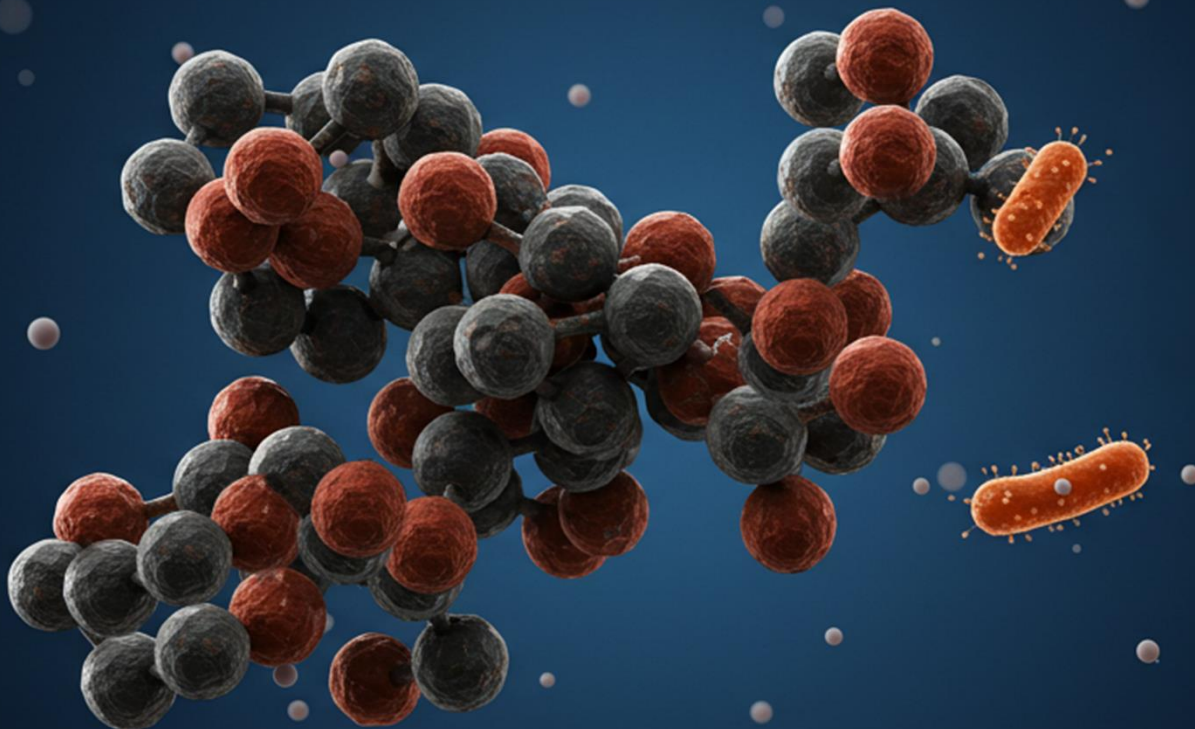
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Editor's note: Magnetic nanoparticles are gaining attention as effective solutions to the growing problem of multidrug-resistant bacteria. In this systematic review, Hosseinzadeh provided a detailed overview of recent studies on the effects of various dopants on the antibacterial mechanisms of magnetic nanoparticles. These dopants boosted the antibacterial activity of these nanoparticles for a variety of applications in clinical, food, and environmental fields, such as drug delivery systems, coatings for implants, wound healing, and antimicrobial packaging.

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