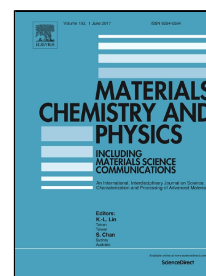


# Accepted Manuscript

Enhanced polarization, magnetic response and pronounced antibacterial activity of bismuth ferrite nanorods



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## Research highlights for Enhanced polarization, magnetic response and pronounced antibacterial activity of bismuth ferrite nanorods

- AAO supported BiFeO<sub>3</sub> (BFO) nanorods have been investigated.
- The polarization of BFO nanorods was observed to be remarkably high (~0.04  $\mu\text{C}/\text{cm}^2$ ).
- Strong antibacterial activity of nanorods was witnessed against *Staphylococcus aureus*.
- The deskinning area on cytoskeletal parts as revealed through TEM imaging, suggest strong cidal activity of the nanorods.
- XPS data substantiates shifting of the peak due to biophysical interaction at the interface releasing reactive oxygen species.

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