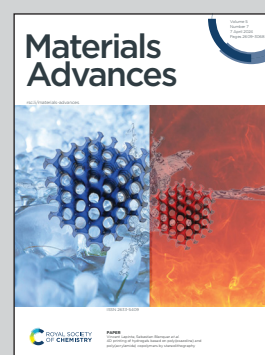


Showcasing research from Professor Shailesh Narain Sharma's laboratory at CSIR- National Physical Laboratory, India, and Dr Rajni Verma's contribution at Seoul National University, South Korea.

Multifaceted properties of TiO_2 nanoparticles synthesized using *Mangifera indica* and *Azadirachta indica* plant extracts: antimicrobial, antioxidant, and non-linear optical activity investigation for sustainable agricultural applications

This research unveils a significant stride in addressing global food scarcity, introducing green synthesized TiO_2 nanoparticles derived from medicinal plant extract. The obtained multifunctional nanoparticles exhibit exceptional antimicrobial efficacy as well as robust non-linear optical properties. The demonstrated antimicrobial activity against various fungi and bacteria, known to impact crop yield, reveals promising applications in agriculture. The Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT & Future Planning (NRF-2021R1A2C2013543) provides support to feature the artwork on the journal cover.

As featured in:



See Rajni Verma, Shailesh Narain Sharma *et al.*, *Mater. Adv.*, 2024, 5, 2767.