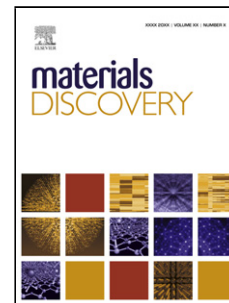


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Ag- and B-TiO₂ nanostructures; preparation, characterization and their antileishmanial activity

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Graphical abstract

Pure TiO₂, Ag- containing TiO₂ and B- containing TiO₂ nanoparticles and nanotubes were synthesized using hydrothermal and sol-gel procedures as shown in the figure. As a boron precursor, very reactive amorphous B was used instead of boron oxide which is typically the most preferred in literature. All nanoparticles and nanotubes were investigated using a number of characterization methods. SEM and TEM analyses were helpful in order to understand the nanostructures in detail, whereas XRD was used to determine all of the phases present. An antimicrobial efficiency of the nanostructures MTT test was carried out against leishmanias. It was proven that doping both TiO₂ nanoparticles and nanotubes with Ag and B-, increase their antileishmanial effect.



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