

Organic nanoparticles from lignocellulosic agricultural residues for plant protection applications

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Several aspects of agriculture industry can be made more innovative and efficient by relying on nanotechnology tools. Extraction of lignocellulosic fractions from agricultural wastes and the following synthesis of organic nanoparticles for applications in plant disease management well fit the need of more sustainable plant protection strategies. A selection of several agroforestry chains has been performed, by identifying the most suitable residues for further valorization. Afterwards, different protocols of extractions including mechanical, chemical and enzymatic pretreatments have been tested in order to obtain organic materials suitable to be used as nanocarriers for green, efficient and innovative agrochemicals.