

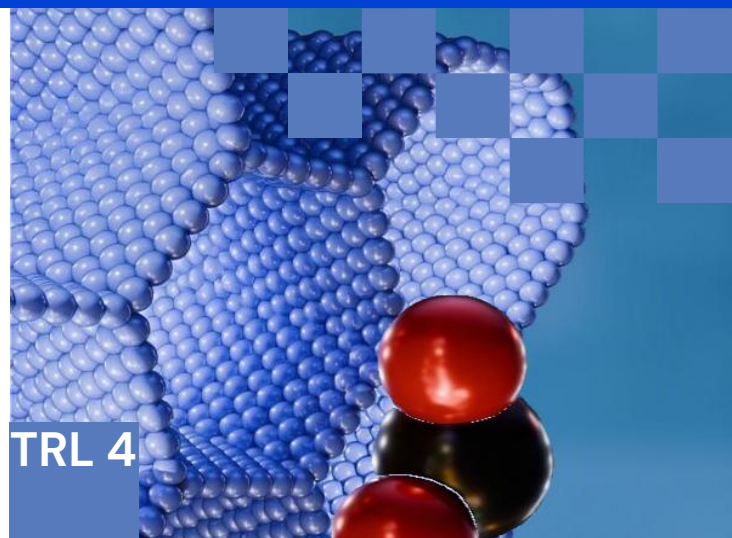
Nanocomposites based on oxovanadium(IV) complexes for high-yield aqueous polymerisation

About the invention

The invention relates to innovative catalytic nanocomposites in which the active centres consist of oxovanadium(IV) acetylacetonate complexes coordinated by auxiliary ligands, deposited on titanium dioxide nanotubes. The invention also covers a method for preparing the nanocomposites, based on a 'molecular shielding' strategy which protects the metal centres from deactivation in an aqueous environment, and their use in the microwave polymerisation of methyl methacrylate (MMA) carried out in the aqueous phase.

The aim of this invention is to provide a new class of nanocomposites and a method for their use, which addresses the issues of toxicity and low efficiency and is consistent with the principles of modern green chemistry.

This technology can be used in industries requiring highly stereoregular polymers of the highest purity.



TRL 4

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IP protection

The invention is protected by patent application No. **P.455355**, filed with the Polish Patent Office.

Technology readiness level

TRL 4 – Technology validated in laboratory conditions

Possible cooperation

- Licence
- Sale of ownership rights
- Partnership for further research and commercialisation