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Title: Directed synthesis of bio-inorganic vanadium oxide composites using genetically modified filamentous phage

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Highlights

- Phage is an excellent seeding for bio-templates for environmentally benign vanadium oxide nanocomposite synthesis
- The synthesized bio-inorganic vanadium oxide showed photodegradation activities
- The fabricated wt phage/vanadium oxide composite exhibited bundle-like structure
- The fabricated RSTB-phage/vanadium oxide composite exhibited a ball with a fiber-like nanostructure
- The virus/vanadium oxide composite could be applied in photocatalysts, sensors and nanoelectronic applications.

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