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Photocatalytic activity of titania deposited on luminous textiles for water treatment

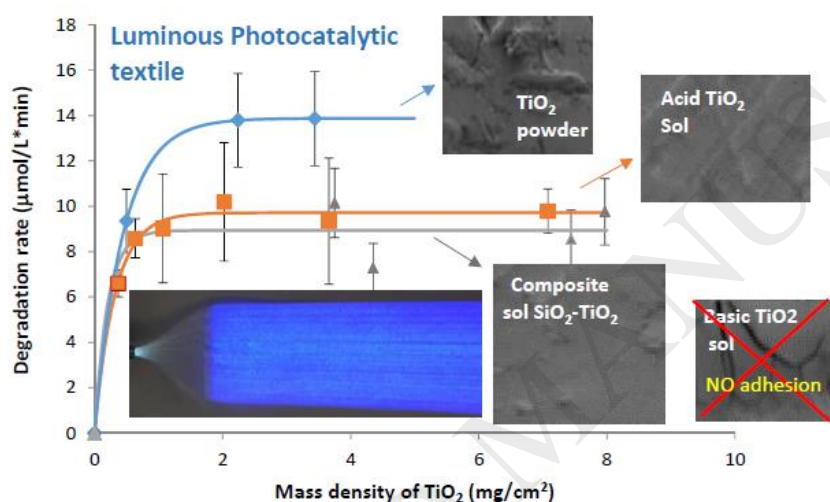
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Graphical Abstract



Highlights

- Luminous textile used as support for TiO₂ photocatalyst and UV light emitter all along the textile
- Only one UV-A LED used for the activation of TiO₂ coated on 100 cm² of fiber optic textile.
- Good homogeneity of coating by using TiO₂ sol opposite to TiO₂ powder suspension.
- Good adherence of TiO₂ for all TiO₂ coatings except for basic TiO₂ sol coating.
- For TiO₂ powder coating, TiO₂ essentially located on the spot formed in the optical fiber cladding.
- Higher efficiency to TiO₂ powder correlate to its higher UV absorption due to its location.

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