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Title: Photocatalytic activities and chemically-bonded mechanism of SiO₂@ TiO₂ nanocomposites coated cement-based materials

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Photocatalytic activities and chemically-bonded mechanism of SiO₂@ TiO₂ nanocomposites coated cement-based materials

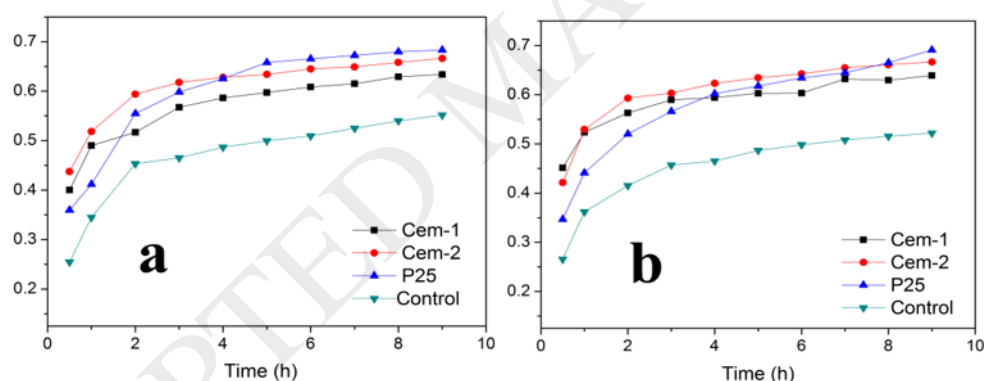
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Graphical abstarct



Two SiO₂@TiO₂ core-shell nanocomposites (sample 1 and 2) were synthesized and coated cement-based materials (cem-1 and cem-2) which show excellent photocatalytic activity. Reaction productions of samples and cement pastes have no negative effect on rhodamine B removal.

Highlights

- Two samples have different deposited density of TiO₂ nanoparticles on each SiO₂ nanosphere, which depend on the difference of the water dosage.
- When the curing time is 28 days, water adsorption rates of mortar-2 at 270 min have

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