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Observation of oxo-bridged yttrium in TiO_2 nanostructures and their enhanced photocatalytic hydrogen generation under UV/Visible light irradiations

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Highlights

- Synthesis of yttrium doped TiO_2 nanoparticles (NPs) and nanorods (NRs) through a facile wet chemical method.
- The doped Y ions are found to be oxo-bridged with the host TiO_2 through Y-O-Ti like formation that confirmed from their XRD and XPS studies
- The NPs of Y:TiO_2 showed increased photocatalytic hydrogen production efficiency
- The observed efficiency of NPs is attributed to their three-dimensional confinement

Abstract