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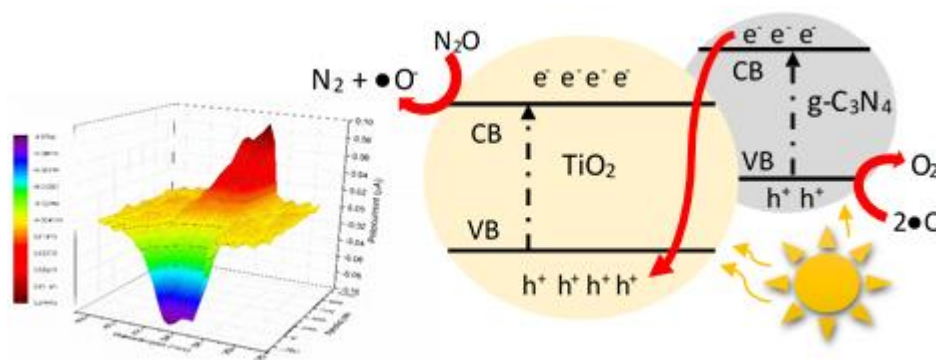
Unconventionally Prepared TiO₂/g-C₃N₄ Photocatalysts for Photocatalytic Decomposition of Nitrous Oxide

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Graphical abstract



Highlights

- TiO₂/g-C₃N₄ nanocomposites with the various TiO₂:g-C₃N₄ weight ratios
- Unconventionally preparation by pressurized hot water processing in a flow regime
- N₂O photocatalytic decomposition under UVA irradiation
- Optimal ratio of TiO₂:g-C₃N₄ was 1:3 for the highest activity under UVA irradiation

Abstract

The TiO₂/g-C₃N₄ nanocomposites with the various TiO₂:g-C₃N₄ weight ratios from 1:1 to 1:3 were prepared unconventionally by pressurized hot water processing in a flow regime. The parent TiO₂ and g-C₃N₄ was prepared by thermal hydrolysis and thermal annealing, respectively. The nanocomposites as well as parent TiO₂ and g-C₃N₄ were characterized using several complementary characterization methods and investigated in the photocatalytic decomposition of N₂O under UVA ($\lambda = 365$ nm) irradiation. All the prepared TiO₂/g-C₃N₄ nanocomposites

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