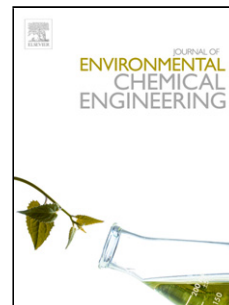


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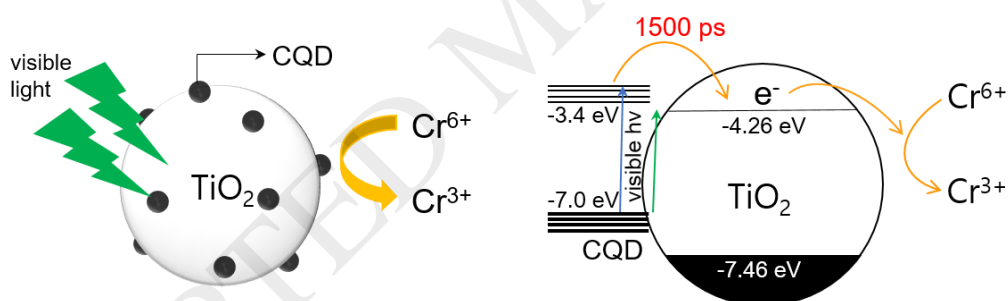
# Visible-light photocatalytic reduction of Cr(VI) via carbon quantum dots-decorated TiO<sub>2</sub> nanocomposites

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## Graphical abstract



## Highlights

- CQDs-decorated TiO<sub>2</sub> (C/TiO<sub>2</sub>) nanocomposites were prepared by hydrothermal treatment.
- The visible-light photoreduction of Cr(VI) via C/TiO<sub>2</sub> depends on dosages of CQDs.
- CQDs act as photosensitizers to provide visible-light response to TiO<sub>2</sub>.
- Photo-generated electrons transfer from CQDs to TiO<sub>2</sub> on the time scale of 1500 ps.
- C/TiO<sub>2</sub> nanocomposites may be applied to treat wastewater under visible light.

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