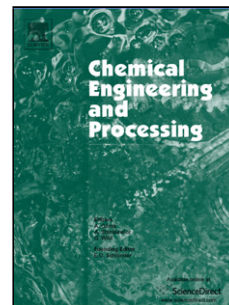


## Accepted Manuscript

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## Evaluation and Optimization of a New Design Photocatalytic Reactor

### Using Impinging Jet Stream on a TiO<sub>2</sub> Coated Disc

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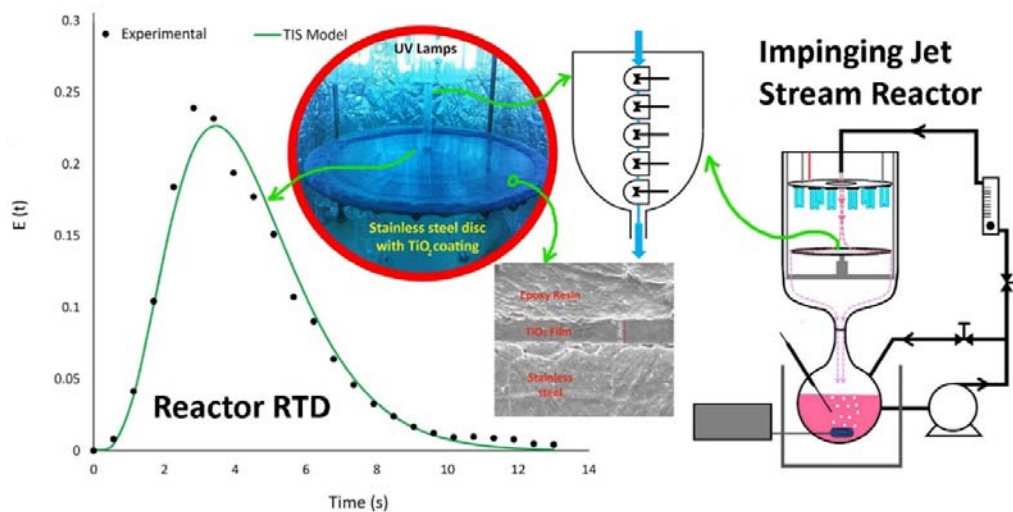
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#### Graphical Abstract



#### Highlights

- A new photoreactor was designed using impinging jet stream on a TiO<sub>2</sub> coated disc.
- Influences of the effective parameters are optimized using RSM and Box–Behnken design.
- Mass transfer limitation was eliminated within the reactor applying a critical rotational speed.
- RTD results indicate that the reactor behavior fitted a tanks-in-series model with five tanks.

#### Abstract

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