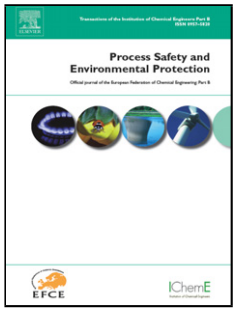

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Strategies to re-establish stable granulation after filamentous outgrowth: insights from lab-scale experiments

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Highlights

- Uncontrolled sludge retention time (SRT) led to large and filamentous granules.
- Excess of filaments led to deterioration of granules properties and disintegration.
- Strategies were adopted to suppress filamentous overgrowth and recover granules.
- Shear stress by enhanced aeration intensity could not reduce filamentous outgrowth.
- Prolonged shear stress combined with iron addition led to stable granulation.