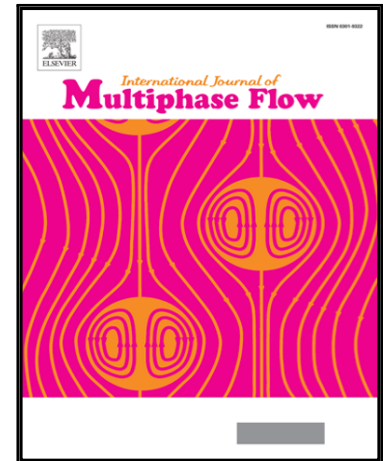


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Nutrient uptake by chemotactic microorganisms in presence of rising oil drops

Nikhil Desai, Sadegh Dabiri, Arezoo M. Ardekani

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Highlights

- Chemotaxis provides nutritional benefit to motile bacteria over non-motile bacteria
- Chemotactic benefit depends acutely on underlying biological and hydrodynamic factors
- Faster swimming and smaller drop size yield larger chemotactic benefits
- Chemotaxis can enhance the instantaneous nutrient consumption rate by 25%

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