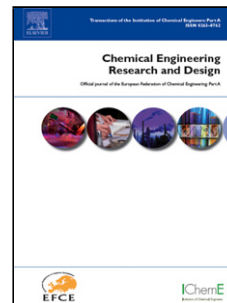


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## A study of bubble size evolution in Jameson flotation cell

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### Highlights

- Using Reynolds number to represent superficial air and liquid velocities.
- Increasing Reynolds number to reduce bubble size independent of MIBC concentration.
- Bubble sizes at different sampling heights in the riser were studied.
- Effects of static pressure and coalescence on bubble size evolution were compared.

**Abstract:** The Sauter mean diameter ( $d_{32}$ ) of bubbles was characterized for a gas-liquid system in a laboratory Jameson-type flotation cell with focus on the size variation in the uprising path of the bubbles in the riser of the flotation cell. Methyl isobutyl carbinol (MIBC) was used as frother for bubble stability. The effect of MIBC concentration, sampling height in the riser, gas flow rate ( $J_g$ ) and liquid flow rate ( $J_l$ ) in the downcomer on  $d_{32}$  was investigated. The  $d_{32}$  significantly decreased

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