

Title	Development of an automated, advanced fluid dynamic gauge for cake fouling studies in cross-flow filtrations
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Summary paragraph	Experimental and computation investigation on removal behaviour of cake fouling layers formed on polymeric membranes. Thickness and strength of cake layers were monitored by an automated fluid dynamic gauging (FDG) technique. This article highlights the advancement made to FDG system and its application to study cake fouling and removal in cross flow filtration.
Novel/notable aspects	Deformation behaviour of cake fouling in microfiltration
Flow key words	Microfiltration; membrane; strength; cake thickness
Cleaning type/key words	Cohesive removal; adhesive removal; Kraft lignin; membrane cleaning, sticky fouling layers
Field/background	Chemical engineering; biochemical Engineering; mechanical engineering
Theory/method/analysis key words	Momentum balances; filtration; Darcy's Law;