

# Tail dynamics of a singularly perturbed coagulation-fragmentation equation

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We consider the multiplicative-additive coagulation-fragmentation equation, where the additive fragmentation is multiplied by a parameter,  $\epsilon$ , that tends to zero. In the limit, one expects that the solutions tend to the Flory solution of the pure multiplicative coagulation equation, where part of the total mass escapes to infinity. We describe how the lost mass behaves by using the Bernstein and Laplace transforms, which lead to a study of a nonlinear backward heat equation and a detailed study of the tail of the Flory solution.

**Submission for a contributed session**