Contribution ID: 35 Type: poster

Fast numerical method for Smoluchowski aggregation model with fragmentation terms

In this work we present an expansion of fast numerical method for Smoluchowski aggregation equations with additional unary fragmentation terms. The method is based on use of low-rank matrix decomposition of kernel kinetic coefficients and fast methods of linear algebra. We also present its application to local model of aggregation in soil profile and discuss results of our numerical experiments.

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