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Sommario/riassunto	Long description: The multi-ion transport and reaction model (MITReM) is used to simulate electrochemical processes. The governing partial differential equations (PDEs) are discretized in space by a combined finite element and residual-distribution scheme. The discrete system is linearized with Newton's method which results in a series of linear systems. The focus of this work is on the development of a stable and efficient point-based algebraic multigrid (PAMG) method for the solution of the linear systems which arise in the MITReM simulation.