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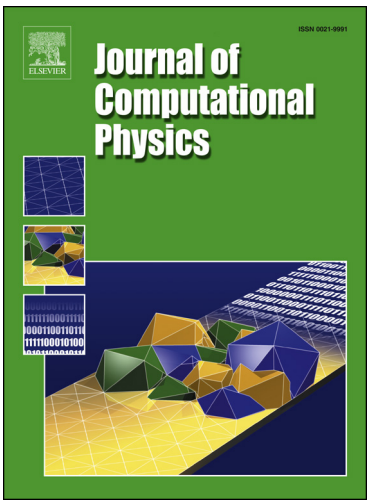

A hybrid formulation for the numerical simulation of condensed phase explosives

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Highlights

- We develop a new formulation and associated numerical algorithm for the simulation of combustion and transition to detonation of condensed-phase commercial- and military-grade explosives, which are confined by (or in general interacting with one or more) compliant inert materials.
- Several Mie–Grüneisen type equations of state (EoS) and reaction rate laws have been implemented and validated.
- An extensive review of current formulations is presented.
- A very extensive validation and evaluation suite is carried out.

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