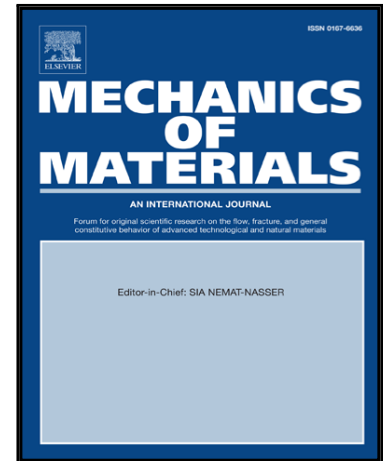


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Phenomenological multi-mechanisms constitutive modelling for thermoplastic polymers, implicit implementation and experimental validation

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Highlights

- A phenomenological model for thermoplastic polymers accounting for viscoelastic, viscoplastic and damage mechanisms is proposed.
- An implicit numerical scheme is provided along with the formulation of the tangent operator.
- The model parameters are identified and validation against an experimental approach and a stepwise identification strategy.
- The capabilities of the proposed model are demonstrated with a series of
- Numerical simulations are performed where complex loading conditions are applied.
- The model is implemented into a FE code towards performing 3D structural analyses

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