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Large deformation static and dynamic response of carbon nanotubes by mixed atomistic and continuum models

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Highlights

- Nonlinear response of CNTs and graphene sheets is examined by mixed atomistic and continuum models.
- The four noded field consistent finite element is employed to eliminate the membrane locking.
- The effects of material and geometric nonlinearities on the nonlinear response are quantified.
- The accuracy of present formulation is investigated against molecular mechanics simulations.

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