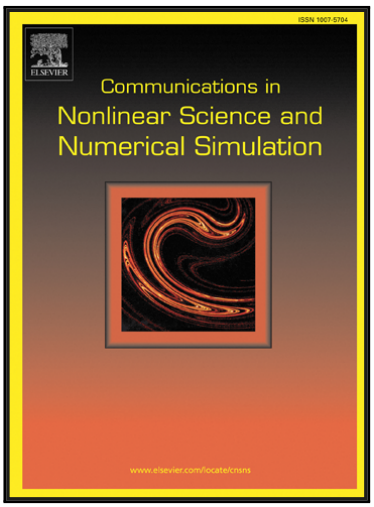


# Nonlinear waves in magnetized quark matter and the reduced Ostrovsky equation

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**Highlights**

- We derive the reduced Ostrovsky equation in nonrelativistic hydrodynamics with an external magnetic field.
- The reduced Ostrovsky equation is for baryon perturbations in magnetized quark gluon plasma.
- We present the rarefaction solution for the reduced Ostrovsky equation.