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Semi-discrete breather in a helicoidal DNA double chain-model

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ACCEHIGHLIGHTS CRIPT

- A damped and discrete zigzag DNA double helix model is investigated;
- The model is compared to the classical Peyrard-Bishop-Dauxois model;
- The breather soliton solution of the complex Ginzburg-Landau equation is obtained;
- The modulational instability is performed;
- The damping forces and the zigzag angle strongly affect the dynamics of the molecule.

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