The authors examined three essential types of nonlinear Schrödinger equation (NLSE), which are NLSE with high nonlinearity, resonant NLSE with parabolic law nonlinearity, and fourth-order dispersive NLSE.

This paper is too long and with much text of poetry type. It should be strongly shortened. While reviewing the manuscript, I found some major issues which I am listing below:

1. Revise the title of the paper.
2. Bulk of citations are mentioned without explanation such as [29-38] should be explained each one.
3. The authors should mention the novelty of their work.
4. The Introduction of the paper needs improvement and revision.
5. The authors are advised to add the following recent work in the introduction section:
   a) Unveiling Complexity: Exploring Chaos and Solitons in Modified Nonlinear Schrödinger Equation
   b) Complex behavior and soliton solutions of the Resonance Nonlinear Schrödinger equation with modified extended tanh expansion method and Galilean transformation
   c) Bifurcations, chaotic dynamics, sensitivity analysis and some novel optical solitons of the perturbed non-linear Schrödinger equation with Kerr law non-linearity
6. Figures 9a and 9b represent what behavior and also figure 13. It seems wrong.
7. After the subsection “The two box-potential” what?
8. The resolution of the figures should be improved.
9. The authors should write and mention every subfigure some figures have and mentioned in the caption and some haven’t been mentioned.
10. The whole manuscript should be checked for grammar errors, typos and especially for punctuation after each equation.
11. Sections 2 and 2.1, sections 3 and 3.1 and sections 4 and 4.1, between the two sections there must be a paragraph about what the authors are going to do.
12. The conclusion of the paper must be revised along with the future direction.
13. Reference should be at the same format.