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Global well-posedness for nonlinear Schrodinger equation with combined power type nonlinearities for positive initial energy

In this talk we consider the Cauchy problem of the nonlinear Schrodinger equation with combined power type nonlinearities. By introducing a family of potential wells we obtain some sharp conditions for global existence and finite time blow up of solutions. In the frame of this work, we do not require the negative initial energy, which solves some open problems existing in the known literature.