1005-35-192 **Irena Lasiecka*** (`il2v@virginia.edu`), Department of Mathematics, Kerchof Hall, University of Virginia, Charlottesville, VA 22901, and **Roberto Triggiani** (`rt7u@virginia.edu`), Department of Mathematics, Kerchof Hall, University of Virginia, Charlottesville, VA 22901. *Wellposedness and uniform decay rates for finite energy solutions of nonlinear Shrodinger equation.* Preliminary report.

We consider semilinear Shrodinger equation with a boundary nonlinear dissipation. No restrictions on the growth of the damping are imposed. Wellposedness of "finite energy " $L_2((\Omega))$ solutions will be established. In addition, the optimal decay rates for the energy will be also discussed. The result presented solves an open problem of boundary stabilization of Schrodinger equation in the natural for the model $L_2(\Omega)$ topology. In addition, the damping proposed is of local (rater than non-local) type. The key technical tools used for the solution are inverse type of boundary reconstruction estimates carried out on the "negative" scale of Sobolev spaces. (Received February 08, 2005)