

Blow Up of Solutions for a Viscoelastic System with Damping and Source Terms in \mathbb{R}^n

Wenjun Liu

College of Mathematics and Physics, Nanjing University of Information Science and Technology,
Nanjing 210044, China and
Department of Mathematics, Southeast University, Nanjing 210096, China

Reprint requests to W. L.; E-mail: wjliu@nuist.edu.cn

Z. Naturforsch. **65a**, 392 – 400 (2010); received May 12, 2009 / revised August 3, 2009

This paper deals with a Cauchy problem for the coupled system of nonlinear viscoelastic equations with damping and source terms. We prove a new finite time blow-up result for compactly supported initial data with non-positive initial energy as well as positive initial energy by using the modified energy method and the compact support technique.

Key words: Blow Up; Viscoelastic Equation; Coupled System; Damping Term.