Record Nr. UNINA9910450691703321 Dynamics in models of coarsening, coagulation, condensation and Titolo quantization [[electronic resource] /] / editors, Weizhu Bao, Jian-Guo Liu Singapore; ; Hackensack, NJ, : World Scientific, c2007 Pubbl/distr/stampa **ISBN** 1-281-12199-1 9786611121990 981-277-022-4 Descrizione fisica 1 online resource (307 p.) Lecture notes series / Institute for Mathematical Sciences, National Collana University of Singapore, , 1793-0758;; v. 9 Altri autori (Persone) BaoWeizhu LiuJian-Guo Disciplina 620.112015118 Soggetti Interfaces (Physical sciences) - Mathematical models Nanostructured materials - Mathematical models Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. CONTENTS; Foreword; Preface; Lectures on Dynamics in Models of Nota di contenuto Coarsening and Coagulation Robert L. Pego; Quantized Vortices in Superfluids - A Mathematical and Computational Study Qiang Du; The Nonlinear Schr odinger Equation and Applications in Bose-Einstein Condensation and Plasma Physics Weizhu Bao; Introduction to Constitutive Modeling of Macromolecular Fluids Qi Wang Sommario/riassunto The Institute for Mathematical Sciences at the National University of Singapore hosted a research program on ""Nanoscale Material Interfaces: Experiment, Theory and Simulation" from November 2004 to January 2005. As part of the program, tutorials for graduate students and junior researchers were given by leading experts in the field. This invaluable volume collects the expanded lecture notes of four of those self-contained tutorials. The topics covered include dynamics in different models of domain coarsening and coagulation and their mathematical analysis in material sciences; a mathematical