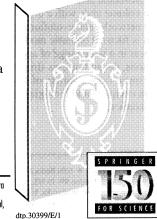**A. Bunde**, University of Hamburg, FRG; **S. Havlin**, Bar Ilan University, Ramat Gan, Israel (Eds.)

Fractals and Disordered Systems

1991. XIV, 350 pp. 163 figs. 10 tabs. Hardcover DM 88,- ISBN 3-540-54070-9

Fractals and disordered systems have recently become the focus of intense interest in research. This book discusses in great detail the effects of disorder on mesoscopic scales (fractures, aggregates, colloids, surfaces and interfaces, glasses, and polymers) and presents tools to describe them in mathematical language. A substantial part is devoted to the development of scaling theories based on fractal concepts. In 10 chapters written by leading experts in the field, including E. Stanley and B. Mandelbrot, the reader is introduced to basic concepts and techniques in disordered systems and is lead to the forefront of current research. In each chapter the connection between theory and experiment is emphasized, and a special chapter entitled "Fractals and Experiments" presents experimental studies of fractal systems in the laboratory.

The book is written pedagogically. It can be used as a textbook for graduate students, by university teachers to prepare courses and seminars, and by active scientists who want to become familiar with a fascinating new field.

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