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| 1. | Record Nr. | UNISA996466805403316 |
| | Autore | Privman Vladimir |
| | Titolo | Directed Models of Polymers, Interfaces, and Clusters: Scaling and Finite-Size Properties [[electronic resource] /] / by Vladimir Privman, Nenad M. Svrakic |
| | Pubbl/distr/stampa | Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1989 |
| | ISBN | 3-540-48120-6 |
| | Edizione | [1st ed. 1989.] |
| | Descrizione fisica | 1 online resource (VI, 122 p. 1 illus.) |
| | Collana | Lecture Notes in Physics, , 0075-8450 ; ; 338 |
| | Disciplina | 541 |
| | Soggetti | Physical chemistry |
| | | Thermodynamics |
| | | Statistical physics |
| | | Dynamical systems |
| | | Atoms |
| | | Physics |
| | | Polymers |
| | | Physical Chemistry |
| | | Complex Systems |
| | | Atomic, Molecular, Optical and Plasma Physics |
| | | Polymer Sciences |
| | | Statistical Physics and Dynamical Systems |
| | Lingua di pubblicazione | Inglese |
| | Formato | Materiale a stampa |
| | Livello bibliografico | Monografia |
| | Note generali | Bibliographic Level Mode of Issuance: Monograph |
| | Nota di contenuto | Directed walk models of polymer conformations -- Line interfaces in two dimensions: Solid-on-solid models -- Polymers at surfaces -- Models of stacks and compact clusters -- Summary. |
| | Sommario/riassunto | This monograph gives a detailed introductory exposition of research results for various models, mostly two-dimensional, of directed walks, interfaces, wetting, surface adsorption (of polymers), stacks, compact clusters (lattice animals), etc. The unifying feature of these models is that in most cases they can be solved analytically. The methods used include transfer matrices, generating functions, recurrence relations, |

and difference equations, and in some cases involve utilization of less familiar mathematical techniques such as continued fractions and q-series. The authors emphasize an overall view of what can be learned generally of the statistical mechanics of anisotropic systems, including phenomena near surfaces, by studying the solvable models. Thus, the concept of scaling and, where known, finite-size scaling properties are elucidated. Scaling and statistical mechanics of anisoptropic systems in general are active research topics. The volume provides a comprehensive survey of exact model results in this field.