1. Record Nr. UNINA9910971545103321

Titolo	Advanced computational techniques in nanoscience / / A.K. Haghi, F. Naghiyev, and S. Abdullayeva, editors
Pubbl/distr/stampa	[Hauppauge] NY, : Novinka, c2013
ISBN	1-62417-269-5
Edizione	[1st ed.]
Descrizione fisica	1 online resource (133 p.)
Collana	Nanotechnology science and technology
Altri autori (Persone)	HaghiA. K
Disciplina	620/.5
Soggetti	Nanotubes Carbon composites Nanostructures
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 (p. 91-96) and index.
Nota di contenuto	Properties of carbon nanotubes -- Factors determining the processes in micro-and nanoscale systems: the main hypotheses and laws -- Peculiarities of the rheological properties and structure of the liquid in nanotubes -- Research methods of fluid flow in nanotubes -- Nanohydromechanics application to problems of oil-field mechanics.
Sommario/riassunto	In this book, the results of investigation of liquid dynamics in carbon nanotubes are presented. The analysis of liquid structures and the character of its flow plus the results of experiments show that the simulation of fluid flow for nanoscale systems should be based on the continuum hypothesis taking into account the quantised character of the liquid in the length scale of intermolecular distances. Consideration of the flow characteristics allows analogy of the behavior of the liquid in a nanotube with a flow of a viscoplastic Bingham fluid.