



# Modelling the Toxicity of Nanoparticles [

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Toxicology Nanotechnology Biological models Pharmacology/Toxicology  
Systems Biology

Monografía

In today's nanotechnology and pharmaceutical research, alternative toxicology testing methods are crucial for ethically and commercially sound practice. This book provides practical guidelines on how to develop and validate quantitative nanostructure-toxicity relationship (QNTR) models, which are ideal for rapidly exploring the effects of a large number of variables in complex scenarios. Through contributions by academic, industrial, and governmental experts, *Modelling the Toxicity of Nanoparticles* delivers clear instruction on these methods and their integration and use in risk assessment. Specific topics include the physico-chemical characteristics of engineered nanoparticles, nanoparticle interactions, in vivo nanoparticle processing, and more. A much-needed practical guide, *Modelling the Toxicity of Nanoparticles* is a key text for researchers as well as government and industry regulators

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interface -- Biological Surface Adsorption Index of Nanomaterials - Modeling Surface Interactions of Nanomaterials with Biomolecules -- Case study I - An integrated data-driven strategy for safe-by-design nanoparticles: The FP7 MODERN Project -- Case study II - Compilation of Data and Modeling of Nanoparticle Interactions and Toxicity and in the European NanoPUZZLES Project -- Case study III The construction of a nanotoxicity database: the MOD-ENP-TOX experience

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