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Nanomaterials have the potential to shift the paradigm for the diagnosis and treatment of many diseases, especially neoplasms, because of intriguing behaviors associated with their unique size-/shape-influenced chemical, physical, and physiological features. Currently, there is a huge imbalance between the several nanoplateforms reported in the literature and the few ones approved for clinical applications. This disequilibrium affects, in particular, plasmonic nanomaterials, which present no approved platforms and few candidates in clinical trials. This trend can be reversed by promoting collaborations among scientists from different fields as well as by improving the multidisciplinary background of researchers interested in this area.

This book is a collection of must-read peer-reviewed papers focusing on (i) the main behaviors of nanomaterials for nanomedicine, (ii) key features nanomaterials need for successful translation to the clinical setting, and (iii) market analysis of nanomaterials at the bedside or on the way. The main aim of this book is to offer a comprehensive point of view to students and researchers in order to promote the translation of new technologies to patients. It is a unique reference for advanced undergraduate- and graduate-level students of nanotechnology and researchers in materials science, nanotechnology, chemistry, biology, and medicine, especially those with an interest in cancer theranostics.



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