

# New & Notable Publications for Libraries Jan-Feb 2019



## Companion Diagnostics (CDx) in Precision Medicine

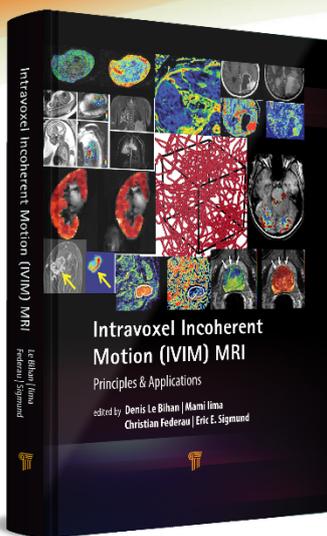
**Il-Jin Kim**, *University of California, San Francisco, USA*

There is a new trend in anti-cancer therapeutics development: a targeted therapy and precision medicine that targets a subgroup of patients with specific biomarkers. An in vitro diagnostic (IVD) assay is required to identify a subgroup of cancer patients who would benefit from the targeted therapy or will not likely benefit or will have a high risk of side effects from the specific drug treatment. This IVD or medical device is called a companion diagnostic (CDx) assay. It is a key to have a robust CDx assay or device for the success of targeted therapy and precision medicine.

**Audience:** Pathologists, oncologists, data scientists, translational scientists in academia and pharmaceutical research, students in bioinformatics, pathology, medical oncology.

**Sales Opportunity:** This book covers the technical, historical, clinical, and regulatory aspects of CDx in precision medicine. Clearly, more and more newly developed oncology drugs will require accompanying CDx assays, and this book, with chapters contributed by renowned oncologists.

Mar 2019, 256 Pages, GBP116  
6 Color & 30 B/W Illustrations  
ISBN 9789814800235 (Cloth)  
ISBN 9780429275906 (eBook)



## Intravoxel Incoherent Motion MRI

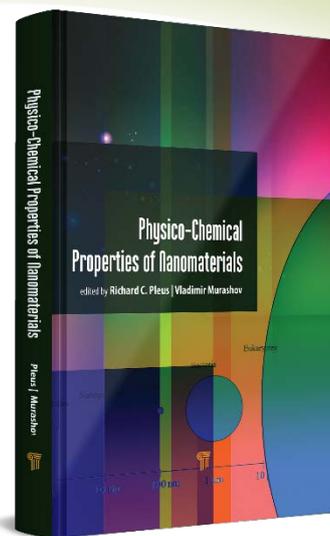
Principles and Applications  
**Denis Le Bihan, Mami Iima, Christian Federau, Eric E. Sigmund**, *NeuroSpin, France*

Intravoxel incoherent motion (IVIM) refers to translational movements which within a given voxel and during the measurement time present a distribution of speeds in orientation and/or amplitude. The concept was introduced in 1986 together with the foundation of diffusion MRI because it had been realized that flow of blood in capillaries (perfusion) would mimic a diffusion process and impact diffusion MRI measurements. IVIM-based perfusion MRI, which does not require injection of any tracer or contrast agent, has been first investigated in the brain, but is now experiencing a remarkable revival for applications throughout the body, especially for oncologic applications, from diagnosis to treatment monitoring.

**Audience:** Students and scientists in medicine, biology, medical physics, etc.

**Sales Opportunity:** This book addresses a number of highly topical aspects of the field from leading authorities, introducing the concepts behind IVIM MRI, outlining related methodological issues, and summarizing its current usage and potential for clinical applications.

Nov 2018, 534 Pages, GBP139  
78 Color & 37 B/W Illustrations  
ISBN 9789814800198 (Cloth)  
ISBN 9780429427275 (eBook)



## Physico-Chemical Properties of Nanomaterials

**Richard C. Pleus, Vladimir Murashov**, *Intertox Inc., USA*

Subtle changes in the physicochemical properties of engineered nanomaterials (ENMs) can influence their toxicity and behavior in the environment and so can be used to help control potential ENM risks. This book attempts to encompass the state of the science regarding physicochemical characterization of ENMs. It illuminates the effort to understand these properties and how they may be used to ensure safe ENM deployment in existing or future materials and products.

**Audience:** Students of physics, chemistry, materials science and engineering.

**Sales Opportunity:** Provides a thorough grounding in the connection of physicochemical properties with the potential health outcomes and how it is now being applied to ENMs. Leads through the scientific progress for understanding the correlation between physicochemical properties of materials from small molecules to nanoscale particles. Includes discussions from US EPA and US FDA and the scientists of NIOSH on the value of physicochemical properties from a regulatory perspective.

Jun 2018, 338 Pages, GBP139  
28 B/W Illustrations  
ISBN 9789814774802 (Cloth)  
ISBN 9781351168601 (eBook)