1. Record Nr. UNINA9910576872103321

Autore	Randazzo Andrea
Titolo	Microwave Sensing and Imaging
Pubbl/distr/stampa	MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 online resource (218 p.)
Soggetti	History of engineering and technology Technology: general issues
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	In recent years, microwave sensing and imaging have acquired an ever-growing importance in several applicative fields, such as non-destructive evaluations in industry and civil engineering, subsurface prospection, security, and biomedical imaging. Indeed, microwave techniques allow, in principle, for information to be obtained directly regarding the physical parameters of the inspected targets (dielectric properties, shape, etc.) by using safe electromagnetic radiations and cost-effective systems. Consequently, a great deal of research activity has recently been devoted to the development of efficient/reliable measurement systems, which are effective data processing algorithms that can be used to solve the underlying electromagnetic inverse scattering problem, and efficient forward solvers to model electromagnetic interactions. Within this framework, this Special Issue aims to provide some insights into recent microwave sensing and imaging systems and techniques.

2. Record Nr. UNINA9910298269003321

Autore	Baici Antonio
Titolo	Kinetics of Enzyme-Modifier Interactions : Selected Topics in the Theory and Diagnosis of Inhibition and Activation Mechanisms / / by Antonio Baici
Pubbl/distr/stampa	Vienna : , : Springer Vienna : , : Imprint : Springer, , 2015
ISBN	3-7091-1402-0
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (503 p.)
Disciplina	570 570285 571.4 572.6
Soggetti	Enzymology Proteins Bioinformatics Computational biology Biophysics Protein-Ligand Interactions Computer Appl. in Life Sciences Biological and Medical Physics, Biophysics
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 at the end of each chapters and index.
Nota di contenuto	Basic Knowledge -- The General Modifier Mechanism -- Taxonomy of Enzyme-Modifier Interactions and the Specific Velocity Plot -- Complements to Enzyme-Modifier Interactions -- The Basic Mechanisms of Inhibition and Nonessential Activation -- Multiple Enzyme-Modifier Interactions -- Multiple Interactions: Essential Activation and Liberation -- Slow-Onset Enzyme Inhibition -- Enzyme Inactivation with a Note on the Significance of Slow Modification Processes.- Dichotomous Keys to Enzyme-Modification Mechanisms. .
Sommario/riassunto	The kinetic mechanisms by which enzymes interact with inhibitors and activators, collectively called modifiers, are scrutinized and ranked

taxonomically into autonomous species in a way similar to that used in the biological classification of plants and animals. The systematization of the mechanisms is based on two fundamental characters: the allosteric linkage between substrate and modifier and the factor by which a modifier affects the catalytic constant of the enzyme. Combinations of the physically significant states of these two characters in an ancestor-descendant-like fashion reveal the existence of seventeen modes of interaction that cover the needs of total, partial and fine-tuning modulation of enzyme activity. These interactions comprise five linear and five hyperbolic inhibition mechanisms, five nonessential activation mechanisms and two hybrid species that manifest either hyperbolic inhibition or nonessential activation characteristics depending on substrate concentration. Five essential activation mechanisms, which are taxonomically independent of the mentioned basic species, complete the inventory of enzyme modifiers. Often masked under conventional umbrella terms or treated as anomalous cases, all seventeen basic inhibition and nonessential activation mechanisms are represented in the biochemical and pharmacological literature of this and the past century, either in the form of rapid or slow-onset reversible interactions, or as irreversible modification processes. The full potential of enzyme inhibitors and activators can only be appreciated after elucidating the details of their kinetic mechanisms of action exploring the entire range of physiologically significant reactant concentrations. This book highlights the wide spectrum of allosteric enzyme modification in physiological occurrences as well as in pharmacological and biotechnological applications that embrace simple and multiple enzyme-modifier interactions. The reader is guided in the journey through this still partly uncharted territory with the aid of mechanistically-oriented criteria aimed at showing the logical way towards the identification of a particular mechanism.