1. Record Nr. UNINA9910741183103321

Titolo	Iron acquisition by the genus Mycobacterium : history, mechanisms, role of siderocalin, anti-tuberculosis drug development / / B. Rowe Byers, editor
Pubbl/distr/stampa	Cham [Germany], : New York, : Springer, 2013
ISBN	3-319-00303-8
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (96 p.)
Collana	SpringerBriefs in molecular science. Biometals, , 2212-9901
Altri autori (Persone)	ByersB. Rowe
Disciplina	572.517
Soggetti	Iron proteins Mycobacteria
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 and index.
Nota di contenuto	A History of Iron Metabolism in the Mycobacteria -- Mycobacterial Iron Uptake Mechanisms -- Siderocalin Combats Mycobacterial Infections -- Design of Anti-TB Drugs Using the Iron Uptake Platform.
Sommario/riassunto	Iron Acquisition by the Genus Mycobacterium summarizes the early evidence for the necessity of iron in mycobacteria and the discovery of the mycobacterial siderophores mycobactin, carboxymycobactin, and exochelin. The structural characterization of the mycobacterial siderophores is described. The genes so far identified as essential for iron acquisition and maintenance of an infection by pathogenic mycobacteria are discussed. The potential role of siderocalin in iron gathering by M. tuberculosis is featured. Because new drugs for M. tuberculosis are needed, this brief also emphasizes the design of antibiotics that interfere with siderophore biosynthesis and the use of siderophore analogs and/or conjugates.

2. Record Nr. UNINA9910523752603321

Autore	Qin Jiahu
Titolo	Consensus Over Switching Network Topology: Characterizing System Parameters and Joint Connectivity / / by Jiahu Qin, Qichao Ma, Huijun Gao, Wei Xing Zheng, Yu Kang
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-030-85657-7
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (254 pages)
Collana	Studies in Systems, Decision and Control, , 2198-4190 ; ; 393
Disciplina	006.30285436
Soggetti	Automatic control Dynamics Nonlinear theories Artificial intelligence Control and Systems Theory Applied Dynamical Systems Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Consensus of Double-integrators over Switching Network Topology -- Generic Linear Systems over Undirected Network: Controllability and Connectivity -- Generic Linear Systems over Directed Switching Network Topology -- Extensions to Containment Control.
Sommario/riassunto	This book aims to extend existing works on consensus of multi-agent systems systematically. The agents to be considered range from double integrators to generic linear systems. The primary goal is to explicitly characterize how agent parameters, which reflect both self-dynamics and inner coupling of each agent, and switching network topologies jointly influence the collective behaviors. A series of necessary and/or sufficient conditions for exponential consensus are derived. The contents of this book are as follows. Chapter 1 provides the background and briefly reviews the advances of consensus of multi-agent systems. Chapter 2 addresses the consensus problem of double

integrators over directed switching network topologies. It is proven that exponential consensus can be secured under very mild conditions incorporating the damping gain and network topology. Chapter 3 considers generic linear systems with undirected switching network topologies. Necessary and sufficient conditions on agent parameters and connectivity of the communication graph for exponential consensus are provided. Chapter 4 furthers the study of consensus for multiple generic linear systems by considering directed switching network topologies. How agent parameters and joint connectivity work together for reaching consensus is characterized from an algebraic and geometric view. Chapter 5 extends the design and analysis methodology to containment control problem, where there exist multiple leaders. A novel analysis framework from the perspective of state transition matrix is developed. This framework relates containment to consensus and overcomes the difficulty of construction of a containment error. This book serves as a reference to the main research issues and results on consensus of multi-agent systems. Some prerequisites for reading this book include linear system theory, matrix theory, mathematics, and so on.