

1. Record Nr.	UNINA9910459704603321
Autore	Biggins Peter
Titolo	Bio-inspired materials and sensing systems [[electronic resource] /] / Peter Biggins, John Hiltz, Anne Kusterbeck
Pubbl/distr/stampa	Cambridge, U.K., : RSC Pub., c2011
ISBN	1-84973-264-7
Descrizione fisica	1 online resource (165 p.)
Altri autori (Persone)	KusterbeckAnne HiltzJohn A
Disciplina	660.6
Soggetti	Materials - Biotechnology Biomimicry Biosensors Electronic books.
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 view on bio-inspiration -- Investment approaches -- Conceptual approach -- Structure -- Collection and sampling -- Receptors and surfaces -- Sensing and transduction -- Energy and power -- Processing and communications -- The SASS approach.
Sommario/riassunto	Can scientists and engineers replicate Nature and develop systems that operate in extreme environments? Bio-inspiration is an established concept which is developing to meet the needs of the many challenges we face particularly in defence and security. This book explores the potential of bio-inspired materials and sensing systems together with examples of how they are being implemented. It is not an exhaustive study of the subject but provides an overview of how bio-inspired or -derived approaches can be used to enhance components, systems and systems of systems for defence and security applications. Readers will gain an awareness of the complexity and versatility of bio-inspired components as well as an understanding of how these technologies can be applied in a variety of operational scenarios. Consideration is given to using a conceptual model that can be deployed in distributed or autonomous operations. Using this model, bio-inspiration with behavioural science plays a major role in identification, movement,

searching strategies and pattern recognition for chemical and biological detection. Examples focus on both learning new things from nature that have application to the defence and security areas and adapting known discoveries for practical use by these communities. This graduate level monograph provides an increased awareness of the need for more sophisticated, networked sensors and systems in the defence and security communities and will be of interest to both specialists in this area and science and technology generalists -- Back cover.

2. Record Nr.	UNINA9910791703203321
Titolo	Chronic inflammation : molecular pathophysiology, nutritional and therapeutic interventions / / edited by Sashwati Roy, Debasis Bagchi, Siba P. Raychaudhuri
Pubbl/distr/stampa	Boca Raton : , : CRC Press, , 2013
ISBN	0-429-10987-3 1-138-19955-9 1-4398-7215-5
Descrizione fisica	1 online resource (463 p.)
Altri autori (Persone)	RoySashwati BagchiDebasis <1954-> RaychaudhuriSiba P
Disciplina	616/.0473
Soggetti	Inflammation - Treatment Anti-inflammatory agents
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	Front Cover; Contents; Preface; Editors; Contributors; Chapter 1 - At the Interface between Acute and Chronic Inflammation: Insights from Computational Modeling; Chapter 2 - The Cellular Component of Chronic Inflammation; Chapter 3 - Mast Cells in Chronic Inflammation; Chapter 4 - Hypoxia and Hypoxia-Inducible Factor in Inflammation; Chapter 5 - Bioactive Phospholipid Mediators of Inflammation; Chapter 6 - Hematopoietic Stem Cells in Atherosclerotic Development and

Resolution; Chapter 7 - Inflammation as a Confounding Factor in Regenerative Medicine
Chapter 8 - NOX in the CNS: Inflammation and Beyond
Chapter 9 - Resolution of Inflammation; Chapter 10 - H₂S in Inflammation; Chapter 11 - Is There a Connection between Inflammation and Oxidative Stress?; Chapter 12 - Chronic Inflammation and Cancer: A Matter of Lifestyle; Chapter 13 - Chronic Wounds and Inflammation; Chapter 14 - Multiphasic Roles for TGF- β in Scarring: Implications for Therapeutic Intervention; Chapter 15 - Natural Vitamin E Tocotrienol against Neuroinflammation and Oxidative Stress; Chapter 16 - Inflammatory Cascades in Autoimmune Disease
Chapter 17 - Shear Stress and Vascular Inflammation: A Study in the Lung
Chapter 18 - NGF and Its Receptor System in Inflammatory Diseases; Chapter 19 - Inflammation, Oxidative Stress, and Antioxidants; Chapter 20 - Lipid Biomarkers of Inflammation; Chapter 21 - Physical Activity and Inflammation: An Overview; Chapter 22 - Omega-6 and Omega-3 Polyunsaturated Fatty Acids and Inflammatory Processes; Chapter 23 - Anti-Inflammatory Phytochemicals, Obesity, and Diabetes: An Overview; Chapter 24 - Anti-Inflammatory Nutraceuticals and Herbal Medicines for the Management of Metabolic Syndrome
Chapter 25 - Epigenetics and Nutriepigenomics in Chronic Inflammatory Lung Diseases: Nutritional and Therapeutic Interventions
Chapter 26 - Biologics: Molecular Medicine from Bench to Bedside; Chapter 27 - Disease Modifying Anti-Rheumatic Drugs; Chapter 28 - Nonsteroidal Anti-Inflammatory Drugs; Back Cover

Sommario/riassunto

Although acute inflammation is a healthy physiological response indicative of wound healing, chronic inflammation has been directly implicated in a wide range of degenerative human health disorders encompassing almost all present day non-communicable diseases including autoimmune diseases, obesity, diabetes and atherosclerosis. Chronic Inflammation: Molecular Pathophysiology, Nutritional and Therapeutic Interventions provides an exposition of the process of chronic inflammation in three parts: Systems Biology of Inflammation and Regulatory Mechanisms
