Table of Contents

Preface

Chapter 1: Chemical, Biological,	Radiological and Nuclear P	rotection,
Detection and Decontamination		

Reactive Fibrous Materials for Decontamination of Chemical and Biological Threats L. Bromberg, X. Su, V. Martis and T.A. Hatton	3
Features of Obtaining ZnO:Ag Thin Films Systems by the Method of Simultaneous Magnetron Sputtering with Subsequent Annealing P. Sarajevs, V. Gerbreders and E. Tamanis	11
Chemical and Radiological Sensors Integration in Unmanned Aerial Systems with ATEX	
Compliance J. Gouveia-Carvalho, W.T. Antunes, T. Gonçalves, V. Lobo, F. Duarte, B. Veríssimo, A. Baptista and M.M. Marques	17
Chapter 2: Materials and Technologies for Personal Protection	
Scalable Spider Silk Inspired Materials with High Extensibility and Super Toughness J.L. Hu, Y.Z. Jiang and L. Gu	31
Thermal Camouflage Clothing in Diurnal and Nocturnal Environments C. Pimenta, C. Morais and R. Fangueiro	37
Development of Chitosan-Gelatin Nanofibers with Cellulose Nanocrystals for Skin	
Protection Applications A.S. Ribeiro, S.M. Costa, D.P. Ferreira, H. Abidi and R. Fangueiro	45
Active Thermal Regulation Systems for Footwear: Development of New Innovative Technologies	
J. Ferraz, S. Silva, H. Fernandes, S. Bogas, B. Vale, J. Gonçalves, C. Matos, R. Pedrosa and T. Leite	57
Chapter 3: Composites for Military Applications	
Improvement of Biocomposite Performance under Low-Velocity Impact Test - A Review U.K. Sanivada, G. Mármol, F.P. Brito and R. Fangueiro	67
Durable and Highly Dissipative Fibrous Composites for Strengthening Coastal Military Constructions	
C. Signorini	75
Mechanical Design and Manufacturing of Signal Interception Antenna in Composite Material for Naval Application	
D. Santoro, U. Lecci, F.M. Pera, D. Gaetano, P. Bia and A. Manna	85
Epidermal Systems and Virtual Reality: Emerging Disruptive Technology for Military Applications M. Marsili	93
Chapter 4: Protection of High-Strength Materials	
Hard Chrome Replacement with Cirrus Doped Electroless Nickel Coatings S.L. Tay, P. Jadhav and C. Goode	105