Preface

Biomedical applications of materials as a form of micro to macro molecules provides an outstanding demonstration of the multi- and interdisciplinary arena of materials. The aim of this book is to provide a critical insight on scientific, engineering and processing aspects of various materials, which can ultimately contribute towards the advancement of medical sciences.

As the target audiences cover a wide interdisciplinary field, each peer-reviewed chapters written with detail background by a selected group of academic and clinical experts. This book entitled "Materials for Biomedical Applications" reflect the true inter-disciplinary nature of materials science, demonstrate the scientific background and interaction between the materials and biosystems, biocompatible or biodegradable polymers, materials for diagnostic, and the development of devices and enabling technologies for therapeutic applications.

This book summarises the up-to-date status of the field, covers important scientific and technological developments by many distinguished experts, who came together to contribute their research work and comprehensive, in-depth and up to date articles. Written in a versatile and contemporary style, this book can be used as an invaluable reference source for graduate students, scientist, researcher working in chemistry, polymer chemistry, polymer engineering, chemical engineering and materials science. We are thankfully appreciate the tremendous efforts and co-operation of all contributing authors for their devotion, valuable time in preparing state-of-art chapters for this book. We would also like to express our gratitude to the publishers and all authors, and others for granting us the copyright permissions to use their illustrations. Although sincere efforts were made to obtain the copyright permissions from the respective owners to include the citation with the reproduced materials, we would like to offer our sincere apologies to any copyright holder if unknowingly their right is being infringed.

For acknowledgment, among the editors, Dr. Mohammad A. Jafar Mazumder would like to take this opportunity to express his sincere thanks to Dr. Abdullah J. Al-Hamdan (Chairman, Department of Chemistry, KFUPM) and also to his colleagues at the King Fahd University of Petroleum & Minerals, Saudi Arabia for their endless support and co-operation.

Dr. Amir Al-Ahmed, would like to take this opportunity to express his sincere thanks to Dr. Haitham M. Ba-Haidarah (Director CORE-RE, KFUPM) and also to his colleagues at the King Fahd University of Petroleum & Minerals, Saudi Arabia for their never-ending support and cooperation.

Without their continuous encouragement, this book would have not been brought into its final form. We would also like to acknowledge the sincere efforts of Mr. Thomas Wohlbier of TTP publishing Authority, in evolving this book into its final shape.

Editors

Mohammad A. Jafar Mazumder

Department of Chemistry King Fahd University of Petroleum & Minerals, Saudi Arabia.

Amir Al-Ahmed

Center of Research Excellence in Renewable Energy (CORE-RE) King Fahd University of Petroleum & Minerals, Saudi Arabia.