

Preface

This work, which is divided into two volumes, *Environment, Energy and Climate Change I* and *Environment, Energy and Climate Change II*, is a consequence of the *Energy and Environment Knowledge Week* (E2KW) congress that was held in Toledo (Spain) from 20th to 22nd of November 2013 (<http://www.congress.e2kw.es>). This congress represented an exceptional opportunity for presenting cutting-edge research in the field environmental, energy and climate change and illustrating the wide experience on several interesting topics of the contributing authors. The two volumes aim to address some of the key issues facing the environmental problems through interdisciplinary approaches.

Volume 1 is dedicated to the *Environmental Chemistry of Pollutants and Wastes* and collects a selection of 15 chapters that review several aspects of the environmental chemistry of air, soil and water contaminants as well as treatments of organic wastes. The first two chapters (by G. Da et al. and by P. Chelin et al.) provide an overview on the atmospheric monitoring of indoor (particles) and outdoor (O_3 and CO) pollutants. A revision of the daytime and night-time atmospheric chemistry of oxygenated pollutants is presented in two following chapters by E. Jiménez and I. Barnes and by B. Cabañas et al., respectively. Soil pollution by heavy metals in mining areas is the subject matter of the chapters by P. Higuera et al., by R.C. Rodríguez et al. and by J. Lillo et al., while the chapter by S. del Reino et al. presents a chemical oxidation treatment of hydrocarbon polluted soils. In the subsequent chapters, sustainable and emerging technologies on chemical treatments of organic wastes (chapters by D. Simón et al., by C. Gutiérrez et al., and by F.J. Fernández et al.), wastewaters (chapter by E. Valero et al.) and animal wastes (chapter by J.M. Martín-Marroquín and D. Hidalgo Barrio) are described. Capture and storage of CO_2 is one of the most promising technologies for reducing the levels of this greenhouse gas. The chapter by J. Rincón et al. is devoted to mitigation of the greenhouse effect by using photocatalytic conversion methods. The use of non-conventional

methods in green chemistry synthesis is also highlighted in the last chapter (by A. de la Hoz et al.).

We sincerely thank all authors for their involvement and efforts in preparing their chapters.

Ciudad Real, Spain
Paris, France

Elena Jiménez and Beatriz Cabañas
Gilles Lefebvre

Environment, Energy and Climate Change I

Environmental Chemistry of Pollutants and Wastes

Jiménez, E.; Cabañas, B.; Lefebvre, G. (Eds.)

2015, XIV, 432 p. 50 illus., 44 illus. in color., Hardcover

ISBN: 978-3-319-12906-8