

Preface

Construction is a major industry in all countries and great deal of natural resources are consumed in buildings. Buildings are responsible for more than 40% carbon emission through embodied energy in construction materials and products, energy consumed during construction processes and operational energy consumed by the building. The sustainability approach to design and construction challenges architects and engineers to weigh environmental factors, energy/resource consumption, social factors, economic considerations, and performance criteria. One approach toward evaluation of material sustainability involves life cycle assessment that includes the inputs and outputs for the phases of material life: raw materials acquisition, fabrication/processing, construction, maintenance, recycling/disposal. Using sustainable building materials and products promotes conservation of dwindling nonrenewable resources internationally. In addition, integrating sustainable building materials into building projects can help reduce the environmental impacts associated with the extraction, transportation, processing, fabrication, installation, reuse, recycling, and disposal of these building industry source materials. This special volume on 'Materials for Sustainable Built Environment' contains Fifteen chapters which have been selected from International Conference on Sustainable Technologies in Building and Environment, held on 15-17 July 2015 at Sathyabama University, Chennai, India. These chapters address a wide range of issues pertaining to building materials with reference to energy efficiency and sustainability in built environment. I hope that these collections of papers are interesting and thought-provoking and will contribute in stimulating debate among scholars, researchers and academicians. I would like to thank the authors for their valuable contribution and I am also grateful to the reviewers for having read and commented on the papers.