

## Preface

Construction is a major industry in all countries and great deal of natural resources are consumed in buildings. Buildings have a significant and continuously increasing impact on the environment since they are responsible for a large portion of carbon emissions and use a considerable number of resources. Building and construction activities worldwide consume 3 billion tons of raw materials each year or 40 percent of total global use. The rapid pace of urbanization leading to massive construction in the building sector has led to an adverse impact on the environment. Buildings consume a major part of the total electricity generated and put a lot of stress on the society at large in terms of electricity shortage and are major contributor to the greenhouse gases. Using energy efficient building materials and products promotes conservation of dwindling nonrenewable resources internationally. In addition, integrating energy efficient building materials into building projects can help reduce the environmental impacts associated with the extraction, transport, processing, fabrication, installation, reuse, recycling, and disposal of these building industry source materials. The application of the latest advancements in various technologies including developments in material science, use of environment friendly building materials, obtaining energy efficiency while producing such materials are of prime concern. There are ample possibilities to reduce energy embodied in buildings. Many opportunities are available for materials advances to reduce the energy use and atmospheric emissions associated with the building sector. In modern construction, the key challenge is to choose materials that can reduce burdens to the environment. This special volume on ‘Materials and Construction Technologies for Sustainable Development’ contains Eleven chapters which address a wide range of issues pertaining to building materials with reference to energy efficiency. The volume will be of special interest to environmentally conscious engineers, producers of building materials, architects, building professional and it may also be useful to scientists and researchers.