

Table of Contents

Preface

Chapter 1: Green Building Materials

Use of Alternative Raw Materials for the Production of Fiber Cement Products M. Hoško, L. Bodnárová and O. Pikna	3
Research of a New Chemically Resistant Repair Mortar Modified with Secondary Raw Materials P. Figala, R. Drochytka and L. Mészárossová	9
The Influence of Organic Fibers on the Fire Resistance of Concrete J. Klobása and R. Hela	15
Reduction of Firing Temperature by Utilization of Secondary Materials for the Synthesis of Forsterite Ceramics M. Nguyen and R. Sokolař	21
Effect of Secondary Fillers in Polymeric Material for CIPP on Fresh Processability K.H. Jakubíková and R. Drochytka	27
Possibilities of Determining K-Value and Activity Index for Ground Granulated Blast Furnace Slag P. Šperling and R. Hela	33

Chapter 2: Silicate Materials

Resistivity Changes of Electrically Conductive Silicate Composites Loaded in Different Directions S. Baranek, V. Uher and V. Cerny	41
The Effect of the Type of Gelling Agent on the Speed of Gelation of Sol-Gels J. Majerová, D. Sklenářová and L. Nevřivová	47
Verification of the Electrical Impedance Method for Measuring the Humidity of Silicate Material E. Hrabalkova, D. Powetz, D. Prusa and S. Stastnik	53
The Effect of the Gelling Agent on the Gelation Rate and the Formed Sol-Gel Structure D. Sklenářová, J. Majerová, A. Kohutová and L. Nevřivová	61
Influence of Sintering Time with Constant Temperature on the Development of the Tricalcium Silicate Crystallinity A. Jančík and K. Dvořák	67

Chapter 3: Cement and Cement-Based Composites

Cohesive Zone Modelling and the Fracture Process of Cement-Based Composites V. Kozák and J. Vala	77
The Effect of Different Grinding Technologies on the Mechanical Properties of Portland Cement Depends on the Type of Intensifier S. Ravaszova and K. Dvořák	83

Chapter 4: Limestone and Lime-Based Composites

Using of Limestone Cement in Fibre-Cement Corrugated Sheets Production M. Hoško and L. Bodnárová	91
The Effect of the Origin and Inner Structure of Limestones on the Burning Process and the Formation of Lime D. Sklenářová and K. Dvořák	97

Chapter 5: Contemporary Composite Materials

Influence of Porous Manganese-Containing Fillers on the Electrodynamic Characteristics of Absorbing Polymer Composite Materials

S.G. Guzii, O. Prysiashna, S.D. Lapovska, O. Khodakovskyy and V. Pokaliuk

105

Lightweight Refractory Materials in Al-Si Binary System Produced by Sol-Gel Method

D. Zemánek and L. Nevřivová

115