Table of Contents

Preface, Conference Committees

Chapter 1: Green Concrete

Estimating the Deterioration due to Chemical Attack in Repurposed Aggregate Concrete	
Using Image Based Techniques R.K. Pancharathi and M.L. Kasulanati	3
Effect of Blending Constant Concentration of Acrylic Polymer with Varying Amount of Fly Ash to the Permeability and Strength of Large Aggregate Pervious Concrete H.M. Del Pilar, C.B. Caballero, M.E.T. Milano and N.S.C. Quimio	9
Performance of the Mechanical and Durability Properties of Eco-Friendly Concrete Containing Glass Powder (GP) and Ground Granulated Blast Slag (GGBS) G. Vasudevan, S.K. Muniyandi, G. Kanniyapan and L.E. Hock	15
Increasing Concrete Durability Against Organic Acid Corrosion with Coal Fly Ash and Bagasse Fly Ash as Cement Replacements J. Koschanin and P. Julphunthong	23
Evaluation of the Mechanical Properties of Recycled Coarse Aggregate Concrete against the Action of Fire	29
A.J. Lamas Chavez, A.F. Aliaga Guevara and P.J.P. Torres Evaluation of the Influence of Brick Dust and Rice Husk Ash on the Mechanical and Physical Behavior of a Geopolymeric and Eco-Efficient Concrete with Partial Cement Replacements	29
S.R.R. Luis, S.N. Eder and K.L. Lopez Pasapera	39
Chapter 2: Green Building Materials	
Exploring Stone Material Behavior and Damage Analysis with Digital Image Correlation M. Daher, A. El Zein, X. Brunetaud, J. Gillibert and K. Beck	47
Slenderness Limits and Buckling Response of Bamboo Scrimber under Axial Compression J. Goonewardena, M. Ashraf, M. Subhani, B. Kafle and J. Reiner	55
Development of Wood-Plastic Soil Tray Composite (WPSTC) Using Polymerized Coir- Wood Dust for Green Roof Structures H.M. Del Pilar and W.G. Gacutan	61
Chapter 3: Functional Materials and Sustainable Technologies in Building Engineering	
Finite Element Analysis of Functionally Graded Sandwich Plates S. Gupta and H.D. Chalak	69
Evaluating the Deicing Performance of Copper Sulfide Nanoparticle-Infused Transparent Photothermal Coatings on Glazing: An Integrative Experimental and Simulation Study R. Tang, W. Jian and D. Lau	75
Development of Hygrothermal Reference Year for Hygrothermal Simulation of Hygroscopic Building Construction for Guangzhou Z.J. Huang and Y. Zhao	83
Evaluation of the Inter-Building Effect on Energy Saving Potential of Radiative Cooling Materials	
Q. Li, J.Y. Chen and X.W. Luo	93
An Experimental Study on Electromagnetic Shielding Effectiveness and Impact Resistance of UHPC for Protective Facilities	99
C.Y. Kuo, Y.K. Tsai, J.Y. Nieh and Y.S. Tian	99

Chapter 4: Properties of Stainless Steel and Structural Steel

Influence of Hydrogen on the Failure Mechanism of Standard Duplex Stainless Steel X2CrNiMoN22-5-3 Exposed to Corrosion Fatigue M. Wolf and A. Pfennig	111
Investigating Different Heat Treatment Methods to Enhance the Mechanical Properties of 9254 Steel	
N.M. Alharbi, B.M. Alghamdi, O.M. Alali, K.N. Alfaleh, A. Almohammedalie, M. Abdesamie and T.N. Baroud	117
The Influence of Sample Thickness on the Bending Fatigue Performance of PBF-Lb 316L	
Material F Rautio F Roux M Jaskari A Mustakangas M Keskitalo M Hietala and A Järvennää	125