

Table of Contents

Preface, Sponsors and Organizing Committees

Chapter 1: Traditional Construction Materials

Evolution of Capillary Porous Structure in Steam Curing Concrete with Mineral Admixtures M.F. Ba and C.X. Qian	3
Development of Cementitious Materials with High Resistance to Sulfate Attack by a Combination of Emulsified Asphalt and Fly Ash G.C. Long, Z. Li, K.L. Ma and Y.J. Xie	8
Research on the Effect of Concentration and Type of De-Icing Salt on Concrete Salt-Scaling Q. Li and Z.Y. Zhou	14
Theoretical Analysis of Chloride Ion Migration Tests in Cementitious Material Research J.B. Yang and R.G. Liu	21
Synthesis of Poly L-Glutamate Initiated by Triethanolamine Z.M. Zhang, S.Q. Wei, T.T. Li and L.H. Han	26
Experimental Research on the Separation and Recycle of Waste Concrete R.H. Zhang	30
Research and Development Progress on Concrete Preparation with Seawater R.C. Liu, F.Y. Jiang and Z.Q. Liu	34
Effects of Solvent Polarity on the Urethane Reaction of 1,2-Propanediol P.F. Yang	38
Effects of Al₂O₃ on the Structure and Properties of Calcium-Magnesium-Silicate Glass Fiber H. Liu, X.T. Wang, Z.F. Wang and B.G. Zhang	42
A Class of Stochastic Control Problem Governed by a Poisson Process S.L. Tian, J.C. Li and K.H. Liu	46
Study on Compressive Strength and Flexural Properties of Igneous Fiber Hydraulic Concrete J.D. Wang, H.T. Liu, J.Z. Zhang and L.J. Wu	56
Study on adsorption of Methylene Blue by the Modified Kaolin M.Q. Qiu, J.J. Zhang and J.W. Ni	60
Rain-Wind-Induced Analysis of Transmission Steel Tower L. Qin and W.J. Ding	64
Melamine Aminated Primary Alcohols Using Potassium Hydroxide/ Activated Carbon Catalysts Z. Li, Y. Ding and J. Liu	68
Flow Field Distribution and Transmission Effect Based on the Flats-Delivered Device of Friction Spinning S.Y. Ding, G.H. Chen and G.T. Han	74
Experiment Study on Capillary Absorption of Fly Ash Concrete at Different Curing Ages J.Y. Sun, N.G. Jin, Y. Tian and X.Y. Jin	78
How to Appreciate the Beauty of Wood as Building Materials J.Y. Zhu and H.X. Tai	82
Comparative Study on the Level of Urban-Rural Integration within Harbin Metropolitan Area Based on Principal Component Analysis Method L.H. Han, G.J. Tong and H. Zuo	86
The Recombination of Time and Space, Architecture, Visual Image and Formal Language - Practice of Accessories Manipulation of “Collage” in Indoorspace Environment Design D. Wang, Y. Li and H. Ma	90
Study on Sulphate Resistance of Often-Used Cementitious Material of High Performance Concrete for Marine K.P. Gu and C.Q. Wang	94

Stochastic Damage Model of Concrete during Freeze-Thaw Process Z.Y. Zhou and M. Sun	102
The Effect of Limestone Powder and Clay Content on MB Value of Manufactured Sand J.X. Ye, L.W. Yu and Y. Zhang	110
The Experimental Study and Analysis on the Scumming Degree of Sea Mud Sintered Perforated Brick with Industrial Waste Slag H.D. Yan and M.H. Lin	115
Effect of Loading Rate on the Bonding Strength between Rebar and Concrete D.M. Yan and G.D. Chen	122
Carbonation Behavior of Concrete in Cyclic Wetting-Drying Environment J.T. Ma, Z.H. Shui, W. Chen and X.X. Chen	126
<i>In Situ</i> FT-IR Studies on the Catalytic Reaction Kinetics of 1,2-Propanediol with Phenyl Isocyanate P.F. Yang	131
Influence of Mineral Admixtures on early Shrinkage of Ordinary Concrete L.F. Zhang, J.Y. Lai, X.Q. Qian and D.L. Hu	135
Diagnosis of Current Employment in Architectural Student Responding to Korean Construction Market S.C. Kim, J.H. Lim, J.H. Park and T.H. Jung	140
Influence of the Operating Temperature on the Ultrafine Grinding in Superheated Steam Jet Mill X.L. Li, J. Li, Y.H. Niu and T. Qiu	145
Effect of Aggregate Shape on the Chloride Diffusivity of Concrete X.Z. Zhou, J.J. Zheng and Y.Y. Liang	150
Properties Analysis of Seaweed as a Traditional Building Material J. Yang	154
On the Nonlinear Matrix Equation Based on Engineering Calculation D.J. Gao	158
Study on Strength, Shrinkage and Creep of Concrete Containing Ultrafine Fly Ash Composites B.J. Liu and Y.J. Xie	162
Experimental Study of Splitting Tensile for Multi-Scale Polypropylene Fiber Concrete N.H. Liang, X.R. Liu and J. Sun	168
Analysis on Reductive Kinetics of SSI Reduced by Hydrogen J.G. Li, S.Z. Li and W. Tian	174
Influence of Concrete Strength Grade and Age on Three Tensile Strengths X.X. He and P. Fang	179
Dry Effect of Cementitious Materials on Testing Results of X-Ray CT J.D. Han, W. Sun and G.H. Pan	187
Review: The Effect Factors of Compatibility of Cement and Superplasticizer M.H. Li, J.M. Zhao, H. Jin, G.Q. Li and Y.S. Wang	193
The Amount Effect of Catalyst on the Urethane Reaction of 1,2-Propanediol in Xylene P.F. Yang	197
Effect of Corrosion on Mechanical Properties of Reinforcing Bar HPB235 Y. Wang and Y. Wang	201
Effect of Gypsum-Contaminated Aggregate on Long Term Properties of Mortar B.X. Li, D. Ke, J.H. Song and K.J. Fu	205
A Study of Microproperties of Historical Brick Material and Qualitative Correlation between Strength and Pore Distribution Y.J. Tang and Q. Yin	210
Research on Traditional Stone Buildings in West Hunan Rural Areas M.F. Zhong	218
Process Research of 1-(3,4-Dichloropheny)-3-Methyl-Pyrazolone-5-one Synthesis H.Q. Yu, Y.B. Mo, Y.F. Liao, H. Zhou and Z.P. He	223
Thermal Analysis of Multifunctional Satellite Structure-Battery Y. Wang and C.Y. Peng	228
The Temperature Field Simulation during Laser Cladding Process Q.Y. Jiang	235

Analysis on the Building Material of the Traditional Copper Hall from the Taishan Mountain, Using XRF and GIS J.W. Zhang	239
Effect of Strain Rate on the Compressive Mechanical Properties of Concrete J.S. Sun, L.J. Ma, Y.M. Dou and J. Zhou	244
Effect of Polymer to early Mechanical Property of the Fly Ash Slurry Y.Z. Lin	248
The Research of Aluminum Alloy Honeycomb Sandwich Panel Mechanical Properties in Out-Plane Compression Test J.P. Hu	252
Form and Formalism: On the Future Role of Structural Design in Architectural Education in China C.M. Herr, T. Fischer, S. Millard and A. Brown	257
The Effects of Mineral Admixture on the Compressive Strength of Concrete M.L. Zhao	263
Influence Analysis of Crack Depth and Position on Asphalt Pavement Structure with 3D Finite Element P. Wang and C. Cui	267
Based on Microscale Laser Shock Processing of Metal Material Characteristics Analysis and Prospect B.F. Wang, X.L. Zhu, O. Xie and Z. Yin	273
Material Development of Nano Silica Indonesia for Concrete Mix J. Bi, B. Hariandja, I. Imran and I. Pane	277
The Study of Red Mud Addition Influences in Metakaolinite-Based Geopolymer Characteristics P.H. Simatupang, R. Hanafi, B.S. Purwasasmita, I. Imran and I. Pane	281
Research on Cementitious Capillary Crystalline Waterproofing Coating for Underground Concrete Works Y. Zhang, X.L. Du, Y. Li, F.M. Yang and Z.G. Li	286
Transportation Velocity and Crystallization Areas of Sulfate Solution in Concrete K.L. Ma, G.C. Long and S.Z. Dai	291
Influence of Emergency Passenger Flow Distribution in Urban Rail Network L. Hong, J. Gao and R.H. Xu	295

Chapter 2: Advanced Construction Materials

Landscape Space Planning on Mountainous Watershed Towns: The Sustainable Exploring Development on Landscape Space of Three Gorges Reservoir District Z. Jia and L.F. Cheng	305
Study on Architectural Art of the Former German Governor's Residence in Qingdao S.H. Li	310
Rare Earth Lanthanum Oxide of Manganese Slag Ceramic Related Physical Properties of Function Y.L. Huang and J. Zhang	315
Research on Life Cycle Cost Model of Drainpipe Network G.Z. Hao, L.M. Wang and S.N. Wang	320
Mechanical Properties and Energy Absorption Capability of Closed-Cell Al Alloy Foam W.H. Yang, Z.G. Wang, P. Cai and J.Z. Hu	325
Mix Proportion Design and Basic Mechanical Properties Experiment of Self-Compacting Lightweight Concrete X.J. Liu and Y.M. Wang	329
Theoretical and Experimental Analysis on Magnetron Sputtering Film Thickness Distribution Y.P. Han, S.Z. Wang, Q.W. Wang, J.X. Wang and M.H. Luo	334
Study on Prestressed Concrete Slabs with Lightweight Aggregate M.J. Mao and Q.N. Yang	338
A Preliminary Study of Stabilizing Artificial Saline Sludge Using Compound Stabilizer X.M. Shen, Z.G. Li, D. Huo and H.Y. Zhao	343

Building Roof Waterproof Application of a New Material W.Y. Gong and D.L. He	348
The Deformation Analysis of Acrylic Waterproof Membrane under the Uniformly Distributed Loads J.M. Zhao, G.Q. Li, M.H. Li, Q.X. Yang and D.M. Liu	352
Application of Nanomaterials in Interior Decoration T.T. Yu and W.P. Hu	356
Stability Study of Chitosan-g-AM Inverse Emulsion Y.S. Ma, L.T. Wang, X.H. Sun and J.Q. Zhang	360
Effect of Fiber Volume Fraction on Fatigue Crack Propagation Rate of UHTCC W. Liu, S.L. Xu and Q.H. Li	364
Failure Predictions of Laminate under In-Plane Tensile Loading Y.H. Yang	370
Study on Primary Reaction Kinetics of Melamine Aminated Monomethoxypoly (ethylene Glycol) Z. Li, Y. Ding and J. Liu	374
Dynamic Constitutive Model of Concrete W.W. Yang, H.F. Liu and J.G. Ning	379
Experimental Study on Mix Proportion of Fair-Faced Concrete for Urban Bridge X.K. Li, X.L. Ma and X.Y. Zhang	383
Sound Insulation Provided by PET Fabric/PVC Composite Materials Y.F. Yao, S. Li and Y.Q. Fu	387
Research on Calcination Condition of Alite-Rich Portland Cement Clinker with $C_{2.75}B_{1.25}A_3$ S.D. Wang, X.Y. Guo and L.C. Lu	392
Research on the Light Transmitting Cement Mortar Y. Li, Z.Y. Xu, Z.W. Gu and Z.Z. Bao	397
Effect of Polymer Latex and Fiber on Properties of Sulpho Aluminate Cement Mortar S.H. Song, F.T. Liu and Y.B. Huang	402
Effect of Superplasticizer Type and Dosage on early-Age Shrinkage of Portland Cement and Rice Husk Ash Pastes G. Sua-Iam and N. Makul	407
Experimental Study on the Combined Aggregate Concrete Strength Y.K. Zhang, E.Y. Chen and Z.L. Guo	413
Study on Preparation Process of SBS / Crumb Rubber Composite Modified Asphalt Y. Wang, B.C. Zhan and J. Cheng	417
Elastic Modulus Calculation of GRT Fiber-Rubberized Haydite Concrete B.H. Xia, Y.C. Liu and Q.W. Zhang	423
Effects of Compositions on the Chloride Ion Permeability of Geopolymer Concrete Q. Wang, J. Da, C.B. Zhang, Z.Y. Ding and Z.T. Sui	428
Material Properties of a New Hybrid-Fiber Engineered Cementitious Composite P. Hermes, Y.X. Zhang, K. Soe and J. Bell	433
Study of Pervious Concrete in Aggregate Gradation Structure F.R. Zhao and Z.L. Ding	439
Corrosion Behavior of Enamel Coated Steel Rebar by EIS F.J. Tang, G.D. Chen, J.S. Volz, R.K. Brow and M. Koenigstein	445
A Study of Thermal Modeling for Fire Spread Mechanism in Residential Building C.S. Ahn, H.Y. Kim, Y.H. You and H.J. Kim	454
Knitting Crafts and Products Design of the Double-Faced Jacquard Stitch X.L. Song, B.Y. Cheng, L. Wei and P.P. Yue	462
Damping Characteristics of a Cantilever Plate Using Permanent Magnetic Constrained Layer Damping Strip Treatment M. Li and H.M. Zheng	466
Influence of Moisture Content and Loading Rate on Flexural Toughness of Fiber Reinforced Shotcrete Remarked F.W. Ning, J.T. Ding, A.S. Su and Y.B. Cai	472
Construction Technology and Quality Inspection of Building Waterproof W.Y. Gong, L.J. Hao and B. Bai	478

Effect of Moisture Absorption on the Bending Strength of CFRP A.Y. Zhang, D.H. Li and D.X. Zhang	482
Numerical Simulation for Karst Water Drainage of an Iron Mine Y.S. Wang, Z.H. Chen and F.C. Zhang	486
Study on Experimental Behavior of Concrete Circular Column Confined by HFRP under Axial Compression S.D. Xu, L.J. Li and Y.C. Guo	491
Effects of Shell and Calcium Carbonate on Properties of Portland Cement G.Y. Wang, L.C. Lu and S.D. Wang	495
The Application of Basalt Fiber in Building Materials R.H. Wu	499
Study on the Performance of Nano Calcium Carbonate Modified Asphalt Concrete AC-13 X.H. Hao, A.Q. Zhang and W. Yang	503
The Research on Flame Retardant Wind Turbines Nacelle Made through VARTM Process Z.T. Wang, Y.K. Luo, X. Ding and G.F. Xi	508
Study on the Practicability of PVA Porous Cement Concrete Pavement D.L. Man and X.Y. Hu	513
Experimental Study on Fracture Properties of Hybrid Fiber Reinforced Concrete Y.D. Shao and W.F. Wang	518
Experiment on Mechanical Behavior of Reinforced Concrete Subjected to Impact Loading H.F. Liu, W.W. Yang and J.G. Ning	523
High Temperature Rheology Property of Asphalt Mastic with Different Mineral Filler X.M. Li, X.L. Nan and D.B. Wei	527
Influence Factors during Preparation of Low-Temperature PCMs Z.Q. Li, H.Y. Li and A.M. Ji	532
Effects of Low Temperature and Light Stress on Gas Exchange and Chlorophyll Fluorescence of Pumpkin Seedlings E.X. Kang, J.J. Luo, H.Z. Qiu, N.L. Chen, D. Su and B.L. He	537
Study on Compatibility of Polycarboxylates Superplasticizer with Different Kinds of Retarders G.B. Gao, S.T. Yan, Y.W. Wang and C.B. Liu	543
Studies on Preparation of Concrete Water Reducer from Xylitol Residue of Corn Cob Z. Wang, J.W. Xue, J.B. Qu and W.X. Liu	548
Poly Silk Peptide Film PH Sensor Based on Zero Current Potentiometry M.M. Ma, Z. Tong and Y. Wen	554
Hydrates and Paste Structure of Slag-Fly Ash Based Cementitious Materials C.H. Fu, W. Ni, H. Wu and D.Z. Li	557
High Velocity Impact Behaviour of Hybrid-Fiber Engineered Cementitious Composite Panels J. Bell, Y.X. Zhang, K. Soe and P. Hermes	563
Influence of Reduction Temperature on Specific Surface Area of SSI J.G. Li, W. Tian and S.Z. Li	568
Production and Characterization of Bioemulsifiers by Thermotolerant Bacteria for Enhanced Oil Recovery Potential Y. Li and C.G. Zheng	573
Voltage Stability Criterion in New and Key Nodes and Regional Research Q.E. Li, R. Ren and J. Qiu	582
Study on Soybean Oligosaccharides Refining Process Y.S. Ma, X.H. Sun and G.L. Song	586
Failure Analysis of Laminate on Influence of the Hole Y.H. Yang	590
Compressive Strength and Microstructure of Multi-Wall Carbon Nanotubes Reinforced Cement Composites J.T. Liu, D.M. Yan and S.L. Xu	594
Strengthening Mechanisms and Microstructure of Vanadium and Nitrogen Microalloyed High Strength Seismic Rebar J.C. Cao, D.W. Zhao, W. Chen, Z. Shi and W.D. Zhao	600

A New Interaction Integral Method for Nonhomogeneous Materials J. Jia, Y.Y. Chen, L. Yu and M.B. Li	605
Strength Model Analysis of the Foam Concrete L.F. Cheng, Y.N. Fu and T.Q. Zhou	610
Estimating Floor Area Ratio of Urban Buildings Based on the QuickBird Image Y.Z. Wu and B. Li	614
Research on Properties of Rock-Mineral Wool as Thermal Insulation Material for Construction S.J. Yang and L.W. Zhang	618
One Lane, Two Lifestyles - Research, Analysis and Reconstruction of Nanluogu Lane Y. Cao, W. Tang and P.F. Zhu	623

Chapter 3: Green Building Materials

Strength and Durability Evaluation by DEM Approach of Green Concrete Based on Gap-Graded Cement Blending L.B.N. Le and P. Stroeven	631
Study on the Cracking Sensitivity of Recycled Fine Aggregate Concrete Based on Orthogonal Experiment C.C. Che, D. Li and F.D. Chen	641
Based on the Mathematical Modeling Thought Method Exploration Z.B. Liu	646
Mechanical Performance Research on Modified Cement Concrete with Recycled Plastic Particles J.H. Di, Z.L. Liu and J.J. Li	650
A Study of Recycled Polystyrene for Structural Concrete Application S.K. Outzen and C. Chen	655
Orthogonal Experimental Study on Thermal Insulation Mortar Containing Mixed Ceramic Sand and Vitrified Micro Bead Aggregates Z.L. Xie, L.Z. Sun and F. Yang	659
Theoretical Study on Optimal Design of Thermal Performance of Aerated Concrete-Based Composite Thermal Insulation Wall F. Yang, L.Z. Sun and Z.L. Xie	663
Influence of Reduction Time of SSI on Nitrite Removal from Wastewater J.G. Li, S.Z. Li and W. Tian	667
Public Service Evaluation Based on Fuzzy Analytic Hierarchy Process R. Zou	672
Mechanism of Silica Fume in Suppressing Alkali-Silica Reaction of Concrete Interfacial Transition Zone Concerns B.G. Zhan, Q. Wang, W.L. Zhou and H.Y. Sheng	676
The Comparative Analysis of Lime Burst between Sintered Shale Brick and Light-Weight Sintered Brick B.B. Huang, J.H. Jing, J.Z. Zhu, C.X. Chen and S. Luo	683
Flame Retardant of Epoxy Resin Composites J.H. Dong	688
Research of Fly Ash-Epoxy Resin Composite J.H. Dong	692
On some Sum-Difference Inequalities and Applications to Boundary Value Problems B.J. Sun and Y. Bao	696
Preparation and Photocatalytic Performances of TiO₂/SnO₂ Composite Films Supported on Carbon Fiber R.F. Zheng, H.X. Hu and Y.Q. Fu	701
Fiber Suitability Analysis of New Delivery Device of Friction Spinning X.X. Tian, G.H. Chen, J.Q. Wang and L.J. Qu	706
Degradation Kinetics of Xylose and Arabinose in Subcritical Water in Unitary and Binary System X.J. Chen, X.Q. Liu, F.L. Xu and X.P. Bai	710

The Structure and Properties of HDPE/EAA-Hydrotalcite Master Batch Nanocomposites J. Qin, H. Zhang, L.P. Chen and J. Yu	715
Design Procedure Concerning Composition of Composites Containing Gypsum-Free Cement J. Brožovský and J. Zach	719
Effect of Rice Straw Amount Portion on Physical Properties of Adding Admixtures Hollow Block J. Liu, H.H. Zhou and B. Zhang	727
Parameter Analysis on the Load-Carrying Capacity of Composite Walls with Concrete Core Columns and Fiber-Reinforced Gypsum Panel Y. Gu and X.L. Jiang	733
Influence of Compounded Mineral Admixtures on Shrinkage and Early-Age Cracking Behaviors of Concrete X.F. Wang and J.L. Zheng	738
Performance Analysis on the Raw Material of Nantong Silt Sintered Brick H.L. Yang and H.M. Liu	743
Experimental Study of Mechanical Properties of Bamboo's Joints under Tension and Compression Load Y.G. Fu, M.Y. Wang, H.B. Ge and L. Li	749
Hydroceramic-Concrete Designed for a Project Material of Soil Stabilization R.G. Chen, Y.L. Chen, X.Y. Zhao and M.W. Grutzeck	756
Leaching Mechanism of Cr(VI) from Chromite Ore Processing Residue with Nitric Acid K. Xiao and G.C. Li	764
Adsorption Characteristics of Congo Red from Aqueous Solution on the Carboxymethylcellulose/Montmorillonite Nanocomposite Y.H. Zhao and L. Wang	769
Experimental Research on Thermal and Mechanical Properties of Modified Rammed Earth Material S.T. Du, J.Z. Ma and D. Wang	773
Durability of Alkali-Activated Slag Cement in Seawater Environment Y.M. Gu and Y.H. Fang	778
Quality Control of Fly-Ash Concrete Strength at early Age and Evaluation Application Research H. Niu	782
The Research on Hygrothermal Characterization of Eco-Fiber Materials S. Yu and X. Zhang	786
Influence of $MgCl_2$ Solution Concentration on Strength of Magnesium Oxychloride Cement Concrete H.X. Qiao, Y. Liu, M.R. Zhou, H. Yu and J. Feng	791
Experimental Research on the Properties of Modified MPC B. Chen, X.Y. Yang and N. Liu	796
Research on Strength Control and Evaluation of Fly Ash Concrete H. Niu	800
Research on Performance Improvement of Confined Recycled Aggregate Concrete J.B. Geng and Z.X. Zeng	805
Study on the Wood Carbon Storage in Low Carbon Economy Construction L. Qin and M.H. Guo	809
Modern Wedding Decoration Design Analysis Y. Li, D. Wang and H. Ma	814
Development of Integrated Bionic Honeycomb Plates J.X. Chen, C.L. Gu, C.F. Wan, J. Xie, X.Q. Hu and S.J. Guo	817
Stress-Strain Model for Confined Concrete in Cross-Shaped Columns L.Z. Sun, T.C. Wang and F. Yang	822
Ecological Risk Assessment of Heavy Metal Pollution in Soil of Beijing L.Y. Yang and S.T. Wu	827
Study of Complex Chemical Activator on Activation Effect of Calcined Coal Gangue X.Y. Song, J.Y. Han and Z.H. Gao	832

Chapter 4: Architectural Design and its Theory

Ecological Transformation of Modern Cemetery Design B. Li	839
Green Methods in Medical Environment Design Y. Cui and Z.T. Miao	843
Research on Teaching Operation Modes of Design Courses in Architecture Education W.Y. Gong	847
Research of Protection Technology of Ancient Building's Information Digital Base on GIS W.D. Xu and K. Su	851
Study on Key Technology of Frame Structure Building Monolithic Movement D.M. Zhao and Y.H. Yao	856
Genetically Finding Algorithm for a Tensegrity Structure B.S. Gan and M. Yamamoto	861
Zhong Shan Road: Comparing and Studying the Updating of Historical Districts in Different Regions L. Zhao, P. Wu and Z.H. Zhang	865
Construction Technology of Centro-Column Drum Towers of Dong Nationality L. Cai, Y. Deng and X. Jiang	870
Northern Livable Settlements Planning and Design of Low-Carbon - In Yancheng, Suqian, Area as an Example J. Wang	877
Design of Lotus-Leaf-Like Decoration Materials R.H. Wu	881
The Strategies about Chinese Contemporary Building's History Context in Speed Time T. Wang, Y. Li, R. Zhang and F. Nie	885
Analysis of Glass Walls Led Display Technology of Shenyang Children's Library C.Q. Li, H. Tang and C.Q. Chang	890
The Research on Residential Program Design and Energy-Saving Control F.R. Wang, L.C. Fan and L. Wen	894
The Regional Creation of the Museum Building X. Ma	900
Color Analysis for Historic Buildings in Old Nantong City J. Luo, W.M. Guo and X.Q. Wang	904
Researches on the Space and Architectural Construction of Stone Cave-Houses at Diantou Village W.C. Han and C.E. Wang	909
A Comparative Study on Traditional Architecture Culture of China and European in Historical Development View Y.C. Zheng and C.M. Yan	913
The Appearance and Support of Mind-Style Preference and Social Background of the Contemporary Interior Design Z.C. Zhu	917
The Application of Cold-Formed Thin-Walled Steel in A Villa Building Design J. Fu, Z.L. Wu, Z.S. Xu, Y.G. Li and K.D. Tang	922
The Architecture Strategies of Organized Urban Construction Y.Z. Zhang and D.W. Zhang	927
Study on Measures to Improve the Thermal Environment Condition of Rural Dwelling in Winter in Yantai Y.F. Ma, Q. Ding, H.Y. Zhao, L. Li and S.G. Liu	932
Research on the Obstacle-Free Environment in the School for the Blind Based on Sensory and Perceptual Characteristics of the Blind Children F.R. Wang, J.D. Wen and T. Wang	937
The Space Design of Radio and Television Building in the Digital and Network Era G.P. Zhang and Y. Qi	942
Study on Structural Morphology of Expressive Force of Architecture W.Q. Xu, X. Duan, D.F. Wu and C. Yu	947

Discuss on the Unification of Architecture Innovation and Structure Form R.P. Xu, S.J. Xing and B.J. Guan	952
The Road of Regional Architecture with Chinese Characteristics G.P. Zhang and D.S. Zhang	956
The Fissility and the Integration of the City's History Street and Building Protection - Take City Xi'an and Beijing as Examples T. Wang, F. Nie and Y. Li	960
Research on the Strategies of Ecological Safety and Planning K.Z. Sun	965
Research on Dwellings with Renewable Materials under Different Geographical Conditions and Climate L.P. Li	969
The Importance of Field Investigation in the Architectural and Interior Design S. Hong	974

Chapter 5: Urban Planning and Design

The Fuzzy Evaluation of Investment Risk Decision-Making of Power Plant Based on the Grey Relation S.L. Liu and Y.X. Song	981
An Elicitation from the Construction of Dam on the Inlet of Sea for the Urban Planning and Urban Construction Y.H. Ye, J. Wu, S.S. Lin, J. Li, J.F. Zou and D.Y. Yu	985
A Research on Design Strategies for "Non-Landmark Buildings" in Urban Design J.S. Xu, Z. Li and Y.W. Liu	989
Study on Children's Outdoor Recreational Site Design in Urban Residential Areas Z.T. Xiao, W.Y. Gong and L.J. Hao	995
Management Problems and Countermeasures of City Outdoor Advertising - Taking Jinan as an Example P. Chen, J.M. Zhang and J. Nan	999
A Study on the Design Mode of Pick-up & Drop-off Space in Kindergarten Z.R. Jiang and Y. Chen	1004
Constructing Green Settlements by the Methods of Low Impact Development Y. Dong and W. Dong	1010
Research on the Countermeasures of Urban Transport Problem in Wuhan H.W. Yang and Y. Sun	1014
The Research of New Construction Model in a Comprehensive Community of New Rural Q.Y. Hua	1018
Urban Design Strategies of Public Space Based on Danger Stress Response L.X. He and S.N. Xu	1026
The Discussions about the Relationship between Road Capacity with Building Floor Area Ratio B. Hu, D.D. Xuan, H.M. Fan, Z.G. Zhang and X. Wu	1032
Establishing Urban Expansion Evaluating System in China C.X. Zhao and P.G. Zhou	1036
Planning and Design Strategies of Open Spaces at the Bottom of High Rise Buildings Based on Environment Comfort in Winter Cities H. Leng and Q. Yuan	1041
Study on Characteristic of the City Based on Society of Phenomenology G. Li	1045
Study on Planning and Design of Children's Outdoor Activity Places of Daily Life in Urban Residential Areas Z.T. Xiao and L.J. Hao	1049
Designing of Small Town Based on its Characteristics S.B. Wu, H. Li and G. Liu	1053
The Landscape and the Spatial Design Research of the City Wall Ruins Park of the Old City at Xiaoyi W.C. Han and R. Shen	1057

Urban Spatial System Planning of Disaster Prevention and Refuge Y.Z. Wu	1061
Landscape Ecological Pattern Evolution of ShenMu County in Northern Shaanxi Province X.J. Ren and X.J. Chen	1065
Sustainable Infrastructure and its Application in Singapore Y.L. Wang	1069
The Analogizing the City & Building Future by Analyzing Scene in the Science Fiction Films and the Human Action Desire K.I. Chin	1074
Study on Construction and Development of Dandong City G. Li	1078
Best Practice in Low-Carbon Community Planning Q.L. Luo and Q.M. Zhan	1082
The Dilemma of the Implementation of the Yangtze River Delta Regional Planning Y. Wang and L. Jiang	1086
To See Shanxi's Specialized Urbanization Development from the Perspective of a Rustic Village's Transformation - Take Huangcheng Village, Shanxi Province as an Example Y. He and W.J. Kong	1094
Tactics Research on Green Space System Planning of Song River Summer Resort City in Harbin Based on Experience Perspective R. Guo and Y.J. Bai	1099
An Application of Aerial Photographs with Geographic Coordinates to a Rural Digital Map W. Namboonruang, N. Suphadon and P. Yong-Amnuai	1103
Study on Eco-Planning of Coal Town Special Land Based on Extenics M. Sun	1108
Research on Style-Shaping Strategies of Small Towns Based on Style Symbol Q. Yuan, H. Leng and T. Shi	1112
Study on Exterior Insulation System of New Composite Insulation Board X.Y. Chen and J.H. Lin	1118
Campus Planning and Design Research Based on College Students' Happiness Rating - Case Study of Shandong Jianzhu University Campus J.M. Zhang, J. Lu and W.J. Sui	1123
Study on Innovation System for Efficient Ecological Industrial Parks in Boxing B. Guo, X.Q. Cui and X.G. Li	1128
Highway Construction under Land Restriction and Space Development along Lines - Exemplify by Shandong Province J.M. Zhang, Y.M. Zhang and Z.D. Liu	1133
Inquiry and Thinking about the Conservation and Development of Ancient Village H.X. Tai, S.H. Zhao and S.H. Song	1138
Research for Renewal Countermeasure of the Historic Block of Qiqihar Catholic Church under Market Economy R. Guo and M.S. Huang	1144
Yunnan Baima Snow Mountain Nature Reserve Ecological Planning Based on the Regional Ecological Risk Assessment H. Li, D.B. Liu, S.Q. Wang, W.J. Yao, X. Yang, F.T. Meng, M.X. Zhang and G.Y. Li	1148
The Significant and Acceptable Features of Urban Public Vehicles for Travellers in Terms of Urbanization O. Kohzadi Seifabad, A. Ismail, S. Matinrad and M.H. Hafezi	1152
Tombs of Celebrities in Beijing M. Zhao and W. Gao	1156
Study on the Inner-Decaying Village in New Village Planning Z.T. Xiao and L.J. Hao	1163
Design and Implementation of Combined Temporary Road and Permanent Road Construction B.J. Guan and S.J. Xing	1167
Look from Ningbo Laowaitan Block of Renovation and City Design of Modern History Block in Ningbo S.J. Xing, Y.S. Wang and B.J. Guan	1171

Research on Effects of Urban Space on Economy and Society L. Ji and J. Huang	1175
Compound Development Direction of City and Scenic Spot - To Create Wuhan City East Lake Recreation Area's Industrial Economy Y. Wen and X. Wang	1179
Research of New Countryside Construction in the Perspective of Public Policy: Discussion on "Tyranny of Experts" in New Countryside Z.M. He	1183
Recreating the Traditional Waterfront Living Space - A Study on the Design Mode of Livable Space under the Concept of Low-Carbon Development Y. Chen and S.Y. Shen	1189
The Research on Method of Regional Urban Design Oriented by Gene Recombination Concept Y.H. Xu, N. Wei and Y. Huang	1195
Primary Exploration on the Human Elements of Middle East Railway Residential Buildings J. Zhang, Q. Yin and Y. Zhang	1201
Research on Land Exploitation and Utilization Guided by Urban Rail Transit Y.N. Wang and L.J. Ren	1207
Land Use Assessment Model of the Development of Low-Slope Hilly Land and its Application of the Changjiang Delta Region of China S. Huang and Q.H. Chen	1211

Chapter 6: Landscape Planning and Design

Evaluation for Climates Adaptive Capability of Traditional Tuzhang Dwelling T. Zhang, J.P. Liu, J. Wang and Q.W. Zhang	1219
Reconstruction after "5.12" Earthquake -Landscape Design of Make-Shift Houses in Leigu Town of Beichuan County M.Y. Zeng and Q.S. Xian	1223
Ecological Recovery of Abandoned Tracks in Xi'an East Suburbs Q. Wang, K. Zheng and Z. Qiao	1227
On The Craft of Gardens (Yuanye) and Urban Landscape Design X.W. Zhang and J.W. Zhao	1232
Construction of Corporate Governance Mechanisms Based on Coordinated Management F. Guo and H. Liu	1236
Call for Humanity - Reflection on Landscape Design of Urban Residence Public Space X. Zhang and Y. Wang	1245
Laboratory Study of Permeability in Low Permeability Medium P. Qi, J. Zhang, Z.R. Mei and Y.X. Wu	1249
Explored the Fully-Mechanized Caving Mining of Water Flowing Fractured Zone Q. Li, C.X. Luo and L.H. Meng	1253
Dynamic Response analysis of Long Span Transmission Tower under Tornado Q. Gao, C. Ren, Y. Xu and Z.Y. Liu	1257
Study on Early-Stage Compressive Strength of Recycled Aggregate Concrete X.L. Liu and T. Lei	1261
Expression of Technological Aesthetics on Contemporary Western Landscape Materials B. Chang and S.F. Liu	1265
Analysis of Seismic Response for the Mega-Sub Controlled Frame with Friction Damper Y.D. Lian, X.J. Wang and T. Li	1269
Research on the Urban Landscape System Planning and Layout Based on the Perspective of Ecological Infrastructure Y. Deng, L. Cai and Z.X. Gong	1274
Study on the Treatment and Application of Urban Street Rainwater based on the Landscape Basin of Double Subsurface Constructed Wetland B.X. Xue, H. Xu and X.F. Kang	1280
The Anti-Seismic Numerical Simulation for a Multi-Storey Frame with Bamboo Engineering Materials Y. Li and W.Y. Dong	1284

The Landscape Future of the Coal-Mine Region -Taking Taiyuan as an Example Q. Wang, K. Zheng and Z. Qiao	1288
Video Compression by Computer and its Application Y. Hu	1293
The Regression Analysis of Corresponding Crack in Asphalt Pavement under Temperature Load S. Yuan and Z.M. Tan	1297
On an Analysis of Ecological Landscape Design L. Gan	1305
Two Algorithms of Getting Inner Grids in Boundary Mesh Search Method for Mesh Generation R. Li, F. Li, J.Q. Zhang and F.T. Shen	1309
Construction of Green Space System of Disaster-Prevention in Old Districts of Zhengzhou City L.J. Zhu and Y. Jia	1314
Study on Similar Simulation of the Roof Strata Movement Laws of the Large Mining Height Workface in Shallow Coal Seam P.W. Xing, X.M. Song and Y.P. Fu	1318
Investigation of Environment of Residential Districts “Zhongyi•Arkadia” in Zhengdong New Zone of Zhengzhou City in China L.J. Zhu	1323
The Principle and Methodology of Landscape Eco-Planning S. Sheng, Y.L. Du, J.L. Rui and R.J. Tao	1327
An Analysis of the Evolution of Nanjing’s Green Space Based on Multi-Temporal Remote Sensing Images H. Xu and G. Qian	1331
A Selection of Possible Pitfalls on the Usage of Empirical Models in the Rational Seal Design Method of South Africa A.D. Mwanza, P.W. Hao and M.H. White	1336
Research on the Method of Urban Landscape Ecological Sustainable Planning in the Viewpoint of Deep Ecology Y. Deng, L. Cai and X.L. Li	1340
A Comparative Study on Environmental Behavior of Two Kinds of Typical Urban Plazas: Taking the Municipal Plaza and the Commercial Plaza in Jinniu District as Examples W. Wang and L. Dong	1346
Design Localism on New Tourism Villages — With New Louhe Village as Example J. Zhang and Q.A. Chen	1352
Semantic Network Method of Urban Landscape Design J. Dong and L. Qi	1361
Research of Wisdom Mode of Construction Program Y. Liu and Y. Li	1365
Analysis of Human Care of Green Ecology in Campus Planning Design X. Bai and C.Q. Yao	1369

Chapter 7: Building Energy Saving Technology

Study on Concrete Beams Reinforced by Steel Wires M.Q. Liu and X.Z. Li	1375
Mechanical Behaviors of Structural Concrete Using Recycled Aggregates from Repeatedly Recycling Waste Concrete J.C. Feng, P.H. Zhu and Q. Xia	1379
The Analysis of Integrated Financial Capacity of the Power Plant S.L. Liu and Y.X. Song	1383
Design and Thermal Performance Test of Compound Wallboard of Rural Energy-Saving Residence in Cold Regions J.F. Hao, C.M. Liu, F. Zhang and G.D. Liu	1387

3D-Modeling and Numerical Analysis of Fracture Behavior in AFM-Specimen on Mixed-Mode I-II Loading Condition Q.F. Li, L. Zhu, G. Jin and X.F. Cui	1391
The Design Framework of Spatial Nodes of Chinese Eastern Railway Culture Town - Case Study of National List Culture Town of Hengdaohezi Town Z.Q. Zhao and S. Li	1395
Activation & Application Research in Concrete of Neimenggu High Aluminum Coal Gangue H.L. Cheng, F.H. Yang and J. Zhang	1400
Implementation Procedure and Ways of Solar Energy Integration with Building Y.F. Huang	1405
Compressive Strength, Chloride Diffusivity and Pore Structure of Non-Autoclaved Prestressed High-Strength Concrete with Metakaolin J.J. Zeng, Z.H. Shui, W.R. Zhang and Z. Leng	1409
Field Test and Analysis of Swelling Force under Atmosphere Action X.W. Li, Y. Wang and Y. Zhang	1415
Characterization and Preparation of Paraffin/Modified Inorganic Porous Materials Composites as Building Energy Storage Materials L. Zhao, R.Y. Ma, X.L. Meng, G. Wang and X.C. Fang	1419
Analysis on the Effect of Shape Coefficient to Energy Saving in Residential Buildings X.P. Feng, H. Lin, Y. Wang and H. Cheng	1425
Application of the Direct-Gain Passive Solar House on Middle and Small-Sized Public Building G.F. Yang, Y. Guo and L. Wang	1429
Effect of Minimum Airflow Setting of VAV Unit on Building Energy Consumption under Korean Climatic Condition K.H. Lee, K.I. Chin and J.H. Yoon	1435
Experimental Study on the Mechanical Property of Concrete-Foam Glass Sandwich Block J.M. Wang, N.J. Wang and L.L. Yuan	1440
The Study on Energy Saving Equipment of Rural Houses in Central China X.T. Li	1444
The Study of Emotional Design and Its Spatial Characteristics H. Ma and J.S. Wang	1451
Concerning the Application of Grass Brick House in Rural Construction - Make Shangdianzi Village in Jilin Province as an Example F. Lv, C. Cao and R.F. Su	1456
Demonstration Project Analysis of Energy Saving Renovation for Existing Building L. Wang, W.L. Tian, Y. Zhang and P. Chen	1461
Morphology and Properties of ASA/PC Blends Y. Han, J. Liu, X.J. He and C. Zhou	1467
The Analysis of Coupled Heat and Moisture Transfer in Building Envelop Based on Numerical Simulation S. Yu and X. Zhang	1471
Technical and Economic Analysis of BIPV Project in a University Campus of Beijing C.X. Jia, Y.P. Guo and S.L. Teng	1477
Seismic Analysis of Non-Proportionate Eccentric Buildings G. Georgoussis	1482
Diagrid Structures for Complex-Shaped Tall Buildings K.S. Moon	1489
Ecological Wisdom and Renewal of Jiarong Tibetan Residence in Zhonglu West Sichuan Province J.H. Li and N. Liu	1493
Subjective Evaluation of Acoustic Environment in Underground Spaces Q. Meng, J. Kang and H. Jin	1498
Preparation and Properties of a Novel Nonflammable Thermal Insulation Material D. Shi, L. Shi, J.Y. Zhang and J. Cheng	1504
Shaking Table Tests of a Free-Standing Cultural Relic Strengthened by Plastic Fasteners Q. Zhou, W.M. Yan and J.B. Ji	1513

The Modeling of TEM Responses Simulated by Multi-Transmitter X.G. Tang, W.B. Hu and L.J. Yan	1518
Influence of Permeated Crystalline Materials on Durability of Hydraulic Concrete K.L. Wang, T.Z. Hu and L. Liu	1522
The Mechanism of Mineral Admixture in Cement Hydration M.L. Zhao	1528
A Resonant Gas Sensor Based on Micro-Cantilever S.M. Li	1532
A Study of Downhole Drillable Pulsing Cementing Device with Low Frequency Self-Excited Hydraulic Oscillation and its Field Application C.P. Nie and D.S. Ye	1536

Chapter 8: Ecological Architecture

Study on the Renewal of New Rural Residential Environment in China from the prospect of Functional Complementation of City and Countryside B.X. Xue and Z.Q. Zhao	1543
Test Study on the Dynamic Parameters of Compound Composite Foundation N. Wang, Z. Feng, Y. Da and W. Lin	1548
Analysis for Flow Stress Model of 33Mn2V Steel H. Fan and F.Z. Wang	1553
An Analysis of Embodied Carbon between Different Types of Residential Buildings in China L. Yuan and J.Y. Qiu	1557
Effect of Interface Elastic Modulus on Damage Mechanism of the Fiber Reinforced Concrete X.Q. Tu, Y.F. Zhang and H. Liu	1562
Renewal and Development of Vernacular Construction Material and Residence in West China J.H. Li and N. Liu	1567
Research on Sustainable Development of Residence in Northwest China under the Urbanization Process Y.B. Jin and C.Q. Zhang	1573
Discussion on Properties and Microstructure of Geopolymer Concrete Containing Fly Ash and Recycled Aggregate X.S. Shi, Q.Y. Wang, X.L. Zhao and F. Collins	1577
Braced Tube Structures for Complex-Shaped Tall Buildings K.S. Moon	1584
Analysis on Ecological Technology and Environment Impact Evaluation of Rammed Earth Residence J.Z. Ma and S.T. Du	1588
The Wind Speed Prediction Based on AR Model and BP Neural Network C.L. Zhang	1593
Instance Analysis of Steel Reinforced Concrete in Soil L.P. Zhou, Y. Ling and H.S. Sun	1597
Measurement and the Distribution Law of <i>In Situ</i> Stresses at Deep Depth of Xingcun Coal Mine J. Wang, Z.B. Guo, F. Zhou, F.B. Su and B.L. Li	1601
Past Analysis of Architecture Design Based on the Concept of Ecology L.H.Z. Zhi and Z. Wu	1608
Thinking the Green Strategies on Today's Rural Architecture in China T. Wang, L.C. Fan and F.R. Wang	1612
Algorithm and Experiment of the Separated Foundation Bearing Capacity of Culverts Considering Lateral Fill W.L. Wang, S.J. Cui, D.J. Zhao and L. Wang	1616
The Feasibility Study for New-Type Forging Flange of in Steel Tower L. Qin, Y. Miao and Y.N. Luo	1625

A New Wet-Type Dust Removal and Desulfuration Equipment and its Application in the Ceramic Industries Z.C. Huang	1629
Post Occupancy Evaluation with Green Facades of Elementary and Junior High Schools in the Yilan Area H.R. Hsieh and F.J. Yeh	1633
Shaping the Vitality of the National List Historic Culture Town Based on the Theory of Urban Catalysts Z.Q. Zhao and Q.L. Wang	1637
The Usage of Appropriate Technology in Green Architecture -Take Village Homes Green Community for Example F. Qiao	1642
The Research of Masonry Failure Criterion Based on Orthogonal Anisotropic Strength Theory W.J. Yang, Y. Li and N. Jiang	1646
The Research on Microscopic Failure Criterion of Masonry W.J. Yang, Y. Li and N. Jiang	1652