

## Table of Contents

### Preface and Committee

<b>Finite Element Analysis of Bending Resistance for RC Beams Strengthened with AFRP Sheets</b> Q.D. Zeng and Y.L. Zhou	1
<b>Structure Information of Barium Hexaferrite and Strategies for its Syntheses</b> Y. Liu, Y. Li, Y. Liu, H.S. Yin, L.L. Wang, K. Sun and Y. Gao	6
<b>Platelet Adhesion on Silicon Modified Carbon Nanotubes Films</b> G. Li and S.X. Zhu	12
<b>Simulation and Optimization of U-Bending Springback Using Genetic Algorithms</b> L. Chen	17
<b>Load and Deformation Properties of Steel Fiber Reinforced Concrete Shear Wall</b> J. Zhao, L.J. Wang and D.Y. Gao	23
<b>Study on Control of Hydraulic Disc Brake System Based on PWM High Speed On/Off Valve</b> Y. Wang and L. Lin	28
<b>Study on Statistical Damage Softening Constitutive Model and Determination of Parameters for Rock Based on Lognormal Distribution</b> J.H. Wen, C.Y. Zhou, L. Huang, Y. Cheng, L.C. Huang and F.F. You	33
<b>Strain Fatigue Behavior of Thin-Walled Tubes of Zr-1Nb and Zr-4 and Thin Plates of N18 at Elevated Temperatures</b> Q. Jia, L.X. Cai and C. Bao	39
<b>Simulation for Fatigue Crack Propagation Behavior Based on Low Cycle Fatigue Critical Damage</b> C. Bao, L.X. Cai and X.W. Huang	45
<b>Design of an Experimental Platform for Hydraulic Servo System</b> J.F. Zhu	51
<b>Target Location and Accuracy Analysis in near Space Bistatic Radar</b> J.Q. Zhang, S.S. Wang, F.N. Wang, J.F. Feng and F. Huang	55
<b>Interfacial Stress Analysis of Fiber Sheet/Steel Plate-Reinforced Concrete Beams with Cracks under Tension and Bending</b> L. Ling, Q.D. Zeng and G.Y. Wang	61
<b>Design of Automatic Clutch System and Simulation of Engagement Process for AMT</b> J.Y. Qu, Y.R. Zhang, G.X. Qu and L. Liu	67
<b>Impact Resistance and Energy Absorption of Functionally Graded Cellular Structures</b> X.K. Wang, Z.J. Zheng, J.L. Yu and C.F. Wang	73
<b>Sensitivity of the Carbon Fiber Interface in Epoxy</b> H.S. Zheng, S.R. Zhu, Z.Q. Li and J. Li	79
<b>Investigation of the Process Capability of Water Cavitation Peening and Shot Peening Processing</b> B. Han, C. Deng and D.Y. Ju	83
<b>Hybrid KPCA-SVM Method for Pattern Recognition of Chatter Gestation</b> Q. Shao, C.J. Feng and W.L. Li	88
<b>Characterization on Duplex Treated Coating Fabricated by Laser Cladding and Active Screen Plasma Nitriding</b> X.D. Zhang, B.S. Xu, S.Y. Dong, Z.J. Wang, H.S. Dong and Q.F. Li	93
<b>The Study of TiC/C Composite Fiber by Chemical Vapor Deposition</b> H.Q. Wang, L.T. Wang and H.Y. Zhang	99
<b>Experimental Studies and Technology Process on Phosphor-Gypsum Decomposition for Producing Sulfuric Acid and Lime</b> G.L. Ying, M.K. Zhou and B.X. Li	103
<b>CRH VIP Seats Human-Machine Scale Analysis</b> L. Ding	108
<b>Air Combat Situation Assessment by Gray Fuzzy Bayesian Network</b> Y.B. Xuan, C.Q. Huang and W.X. Li	114

<b>The Research on Chaotic Signal Tracking Algorithm for SR-UKF-PF</b> Q. Tao, L.H. Zhu and B. Pan	120
<b>Integrated Guidance, Control and Maneuver for Anti-Vessel Missiles Based on Backstepping Method</b> C.Y. Li, J.Y. Yu, L. Han and W.G. Zhang	126
<b>Integrate Uncertainty in the Process of Prognostics for Electronics</b> Y. Wang, M.Q. Xiao and J.Y. Fang	132