

Vol. 34 • No. 6 • December 2021



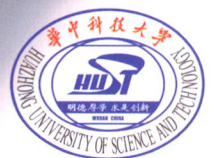
Q K 2 2 0 4 9 6 7

Acta Mechanica Solida Sinica

固体力学学报 (英文版)

 Springer

万方数据



EDITORIAL NOTES

Preface to the Special Issue on the Dynamic Behaviors and Energy Absorption of Materials and Structures
J. Qian · R. Bao · W. Chen 781

REVIEW

Theoretical Perspectives on Natural and Artificial Micro-swimmers
J. Liu · Y. Fu · X. Liu · H. Ruan 783

ORIGINAL PAPERS

Valley-Chiral Edge States of Antisymmetric Plate Wave in Phononic Crystals with Linear Defect
J. Zhao · W. Yuan · F. Yang · Z. Zhong 810

An Optimal Design of the Two-Staged Square Sectional Combined Energy Absorption Structure with Local Surface Nanocrystallization
X. Xu · J. Qu · T. Li · Z. Tong · Z. Zhao · Z. Zhou 820

Multiple Impact Phenomenon in Impact Hammer Testing: Theoretical Analysis and Numerical Simulation
J. Li · K. Lin · Y. Hu · Y. Yang · Y. Wang · Z. Huang 830

A Peridynamic Model for the Dynamics of Defects with Asymmetric Potential Wells
J. Xing · J. Wang · L. Wang 844

Novel Lightweight and Protective Battery System Based on Mechanical Metamaterials
Y. Huang · W. Guo · J. Jia · L. Wang · S. Yin 862

High-Temperature and Low-Frequency Acoustic Energy Absorption by a Novel Porous Metamaterial Structure
Q. Liu · X. Liu · C. Zhang · F. Xin 872

Energy Absorption Performance of Bio-inspired Honeycombs: Numerical and Theoretical Analysis
J. Sherman · W. Zhang · J. Xu 884

Dynamic Deformation of Frozen Soil at a High Strain Rate: Experiments and Damage-Coupled Constitutive Model
Z.W. Zhu · W.R. Tang · G.Z. Kang 895

Solid-Liquid Composites with High Impact Resistance
M. Yu · X. Li · P. Lv · H. Duan 911

Complete Solution of Large Plastic Deformation of Square Plates Under Exponentially Decaying Pulse Loading
F. Chen · L. Tian · T.X. Yu · L. Zhu 922

Experiment and Numerical Simulation on the Dynamic Response of Foam-Filled Tubes Under Lateral Blast Loading
Z. Liu · T. Zhang · S. Li · J. Lei · Z. Wang 937

Modelling of Non-Newtonian Starved Thermal-elastohydrodynamic Lubrication of Heterogeneous Materials in Impact Motion
X. Bai · Q. Dong · H. Zheng · K. Zhou 954

Electrical Power Generation Using Dynamic Piezoelectric Shear Deformation Under Friction
P. Wang · Y. Xiao · N. Wu 977

Nonlinear Young's Modulus of New Red Sandstone: Experimental Studies
E. Riabokon · V. Poplygin · M. Turbakov · E. Kozhevnikov · D. Kobiakov · M. Guzev · M. Wiercigroch 989

Abstracted/Indexed in BFI List, CLOCKSS, CNKI, CNPIEC, Dimensions, EBSCO Discovery Service, Ei Compendex, Google Scholar, INSPEC, Journal Citation Reports/Science Edition, Naver, Norwegian Register for Scientific Journals and Series, OCLC WorldCat Discovery Service, Portico, ProQuest-ExLibris Primo, ProQuest-ExLibris Summon SCImago, SCOPUS, Science Citation Index Expanded (SciSearch), TD Net Discovery Service, UGC-CARE List (India)

EDITORIAL NOTES

Preface to the Special Issue on the Dynamic Behaviors and Energy Absorption of Materials and Structures
J. Qian · R. Bao · W. Chen 781

REVIEW

Theoretical Perspectives on Natural and Artificial Micro-swimmers
J. Liu · Y. Fu · X. Liu · H. Ruan 783

ORIGINAL PAPERS

Valley-Chiral Edge States of Antisymmetric Plate Wave in Phononic Crystals with Linear Defect
J. Zhao · W. Yuan · F. Yang · Z. Zhong 810

An Optimal Design of the Two-Stage Square Sectional Combined Energy Absorption Structure with Local Surface Nanocrystallization
X. Xu · J. Qu · T. Li · Z. Tong · Z. Zhao · Z. Zhou 820

Multiple Impact Phenomenon in Impact Hammer Testing: Theoretical Analysis and Numerical Simulation
J. Li · K. Lin · Y. Hu · Y. Yang · Y. Wang · Z. Huang 830

A Peridynamic Model for the Dynamics of Defects with Asymmetric Potential Wells
J. Xing · J. Wang · L. Wang 844

Novel Lightweight and Protective Battery System Based on Mechanical Metamaterials
Y. Huang · W. Guo · J. Jia · L. Wang · S. Yin 862

High-Temperature and Low-Frequency Acoustic Energy Absorption by a Novel Porous Metamaterial Structure
Q. Liu · X. Liu · C. Zhang · F. Xin 872

Energy Absorption Performance of Bio-inspired Honeycombs: Numerical and Theoretical Analysis
J. Sherman · W. Zhang · J. Xu 884

Dynamic Deformation of Frozen Soil at a High Strain Rate: Experiments and Damage-Coupled Constitutive Model
Z.W. Zhu · W.R. Tang · G.Z. Kang 895

Solid-Liquid Composites with High Impact Resistance
M. Yu · X. Li · P. Lv · H. Duan 911

Complete Solution of Large Plastic Deformation of Square Plates Under Exponentially Decaying Pulse Loading
F. Chen · L. Tian · T.X. Yu · L. Zhu 922

Experiment and Numerical Simulation on the Dynamic Response of Foam-Filled Tubes Under Lateral Blast Loading
Z. Liu · T. Zhang · S. Li · J. Lei · Z. Wang 937

Modelling of Non-Newtonian Starved Thermal-elastohydrodynamic Lubrication of Heterogeneous Materials in Impact Motion
X. Bai · Q. Dong · H. Zheng · K. Zhou 954

Electrical Power Generation Using Dynamic Piezoelectric Shear Deformation Under Friction
P. Wang · Y. Xiao · N. Wu 977

Nonlinear Young's Modulus of New Red Sandstone: Experimental Studies
E. Riabokon · V. Poplygin · M. Turbakov · E. Kozhevnikov · D. Kobiakov · M. Guzev · M. Wiercigroch 989

Abstracted/Indexed in BFI List, CLOCKSS, CNKI, CNPIEC, Dimensions, EBSCO Discovery Service, Ei Compendex, Google Scholar, INSPEC, Journal Citation Reports/Science Edition, Naver, Norwegian Register for Scientific Journals and Series, OCLC WorldCat Discovery Service, Portico, ProQuest-ExLibris Primo, ProQuest-ExLibris Summon SCImago, SCOPUS, Science Citation Index Expanded (SciSearch), TD Net Discovery Service, UGC-CARE List (India)