Tom Proulx
Editor

Time Dependent Constitutive Behavior and Fracture/Failure Processes, Volume 3

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Preface


Each collection presents early findings from experimental and computational investigations on an important area within Experimental Mechanics. The current volume on the Symposium on Time Dependent Constitutive Behavior and Failure/Fracture Processes includes studies on:

Characterization and modeling of behavior at multiple scales; viscoelasticity, viscoplasticity; transport, chemically and electronically active processes; multiphase and biomaterial systems; thermodynamics; shape memory; mechanics of testing; dynamic rate-dependent behaviors; large deformations; residual stresses; time (rate)-dependent damage and failure; time (rate)-dependent polycrystalline, single crystal and nanocrystalline behaviors; multifunctional materials; mechanics of processing; design methods; environmental interactions; experimental methods and techniques; linear and non-linear time-dependent behavior; time (rate)-dependent composite materials of all types; numerical analysis; physical aging; rheological properties; temperature, pressure, and moisture effects on time dependence; damping.

The papers in the Symposium address constitutive, time (rate)-dependent constitutive and fracture/failure behavior of a broad range of materials systems, including prominent researchers in both applied and experimental mechanics. Solicited papers involve non-negligible time-dependent mechanical response in cases incorporating non-mechanical fields. Papers address modeling and experimental aspects of the subject areas.

The organizers thank the presenters, authors and session chairs for their participation in this symposium.

Bethel, Connecticut

Dr. Thomas Proulx
Society for Experimental Mechanics, Inc
Contents

1 Thermal and Mechanical Characterization of a Healable Polymer
   C. Nielsen, H. Weizman, S. Nemat-Nasser  

2 Fracture Behavior of Polymeric Foams Under Mixed-Mode Loading
   E.E. Gdoutos  

3 Coupled Experimental and Computational Analysis of Fracture Path Selection in PMMA Blocks
   C.L. Tsai, Y.L. Guan, R.C. Batra, D.C. Ohanehi, J.G. Dillard, E. Nicoli, D.A. Dillard  

4 Procedures for Mixed Mode Fracture Testing of Bonded Beams in a Dual Actuator Load Frame
   E. Nicoli, D.A. Dillard  

5 Linear Viscoelastic Behavior of Poly(Ethylene Therephtalate) Above T_g Amorphous Visco-elastic Property V_s Crystallinity: Experimental and Micromechanical Modeling
   F. Bédoui  

6 Experimental Study of Voids in High Strength Aluminum Alloys
   H. Jin, W.-Y. Lu, J. Korellis, S. McFadden  

7 Local Strain Accommodation in Polycrystalline Ni-Base Superalloys
   J. Walley, R. Wheeler, M.D. Uchic, M.J. Mills  

8 Coupled Thermal-mechanical Experiments for Validation of Pressurized, High Temperature Systems

9 Predictive Simulation of a Validation Forging Using a Recrystallization Model

10 Characterization of Liquefied Natural Gas Tanker Steel From Cryogenic to Fire Temperatures
    B.R. Antoun, K. Connelly, G.W. Wellman, J.F. Dempsey, R.J. Kalan  

11 Nonlocal Microdamage Constitutive Model for High Energy Impacts
    R.K. Abu Al-Rub, A.N. Palazotto
12 Impact Testing and Dynamic Behavior of Materials
L.W. Meyer, N. Herzig, F. Pursche, S. Abdel-Malek

13 Development of an Internal State Variable Model to Describe the Mechanical Behavior of Amorphous Polymer and its Application to Impact Testing
J.L. Bouvard, D. Ward, E.B. Marin, D. Bammann, M.F. Horstemeyer

14 Examination of Validity for Viscoelastic Split Hopkinson Pressure Bar Method
T. Tamaogi, Y. Sogabe

15 Weldability and Toughness Evaluation of the Ceramic Reinforced Steel Matrix Composites (TiB$_2$-RSMC)
E. Bayraktar, F. Ayari, D. Katundi, J.-P. Chevalier, F. Bonnet

16 Nonlinear Viscoelastic Nanoindentation of PVAc
F. Wang, Y. Wang, B. Fu, H. Lu

17 Theoretical and Computational Modelling of Instrumented Indentation of Viscoelastic Composites
Y.-P. Cao, K.-L. Chen

18 Obtaining Viscoelastic Properties From Instrumented Indentation
Y.-T. Cheng

19 Mechanical Properties Measurement of Sand Grains by Nanoindentation
F. Wang, B. Fu, R.A. Mirshams, W. Cooper, R. Komanduri, H. Lu

20 Design and Implementation of Coupled Thermomechanical Failure Experiments
B.R. Antoun, J.F. Dempsey, G.W. Wellman, W.M. Scherzinger, K. Connelly

21 The Role of Interface and Reinforcement in the Finite Deformation Response of Polyurethane-Montmorillonite Nanocomposites

22 Time-Temperature Superposition and High Rate Response of Thermoplastic Composites and Constituents
P.D. Umberger, S.W. Case, F.P. Cook

23 Measuring Time Dependent Diffusion in Polymer Matrix Composites
S.P. Pilli, V. Shutthanandan, L.V. Smith

24 New Strain Rate Dependent Material Model for Fiber Reinforced Composites
L.W. Meyer, M. Mayer

25 Effect of Crystallinity and Fiber Volume Fraction on Creep Behavior of Glass Fiber Reinforced Polyamide
T. Sakai, Y. Hirai, S. Somiya

26 Hybrid Metal-Ceramic Thermo-oxidation Protection Layers for Polymer Matrix Composites
K.V. Pochiraju, G.P. Tandon

27 Degradation Phenomena Under Water Environment of Cotton Yarn Reinforced Polylactic-acid
S. Somiya, T. Ooike
28 Advanced Accelerated Testing Methodology for Life Prediction of CFRP Laminates
Y. Miyano, M. Nakada

29 Dynamic Properties of Foam With Negative Incremental Bulk Modulus
Y.-C. Wang, T. Jaglinski, H.-T. Chen

30 A Note on Automated Time-Temperature and Time-Pressure Shifting
M. Gergesova, B. Zupančič, I. Emri

31 Application of Fractional Derivatives Models to Time-dependent Materials
M. Sasso, G. Palmieri, D. Amodio

32 Tissue- and Microstructural-level Deformation of Aortic Tissue Under Viscoelastic/Viscoplastic Loading
D. Shahmirzadi, A.H. Hsieh

33 Strain Accumulation Process in Periodically Loaded Polymers
B. Zupancic, I. Emri

34 Viscoelastic and Viscoplastic Mechanical Behavior of Polymeric Nanofibers: An Experimental and Theoretical Approach
M. Naraghi, I. Chasiotis

35 Effect of Polyacrylate Interlayer Microstructure on the Impact Response of Multi-layered Polymers
J.S. Stenzler, N.C. Goulbourne

36 Visco-elastic Properties of Carbon Nanotubes and Their Relation to Damping
D. Qian, Z. Zhou

37 Ballistic Missile Defense System (BMDS) Solutions Using Remendable Polymers

38 Experimental Characterization and Modeling of Shape Memory Material for Downhole Completion Applications
C. Feng, G.D. Shyu, S. Gaudette, M. Johnson

39 Mechanics of Persulfonated Polytetrafluoroethylene Proton Exchange Membranes
M.N. Silberstein, M.C. Boyce

40 The Influence of Pressure on the Large Deformation Shear Response of a Polyurea
M. Alkhader, W.G. Knauss, G. Ravichandran

41 Micromechanics Models for Predicting Tensile Properties of Latex Paint Films

42 Time Dependent Recovery of Shape Memory Polymers
F. Castro, K.K. Westbrook, J. Hermiller, D.U. Ahn, Y. Ding, H.J. Qi

43 Structural Relaxation Near the Glass Transition: Observing Kovacs Kinetic Phenomenology by Mechanical Measurements
Y. Guo, R.D. Bradshaw
44 Creep Mechanisms in Bone and Dentin Via High-Energy X-ray Diffraction
A.C. Deymier-Black, A. Singhal, F. Yuan, J. Almer, D. Dunand

45 High Local Deformation Correlates With Optical Property Change in Cortical Bone
X. Sun, J.H. Jeon, S. Fuhs, J. Blendell, O. Akkus

46 Probing Pre-failure Molecular Deformation in Cortical Bone With Fluorescent Dyes
X. Sun, J.H. Jeon, J. Blendell, O. Akkus

47 The Influence of MgO Particle Size on Composite Bone Cements
M. Khandaker, S. Tarantini

48 Small-scale Mechanical Testing: Applications to Bone Biomechanics and Mechanobiology
M.M. Saunders

49 Determination of Fracturing Toughness of Bamboo Culms
N.-S. Liou, M.-C. Lu

50 Biomechanical Analysis of Ramming Behavior in Ovis Canadensis
P. Maity, S.A. Tekalur

51 Deformation and Failure Mode Transition in Hard Biological Composites
R. Rabiei, S. Bekah, F. Barthelat

W. Zhao, C. Cao, and C.S. Korach

53 Influence of Diamond-like Carbon Coatings on the Fatigue Behaviour of Spinal Implant Rod
Y.C. Pan, J. Don, T.P. Chu, A. Mahajan

54 Modeling Creep and Fatigue Properties of Bone at Nanoscale Level
F. Yuan, A. Singhal, A.C. Deymier-Black, D.C. Dunand, L.C. Brinson

55 High-energy X-ray Diffraction Measurement of Bone Deformation During Fatigue
A. Singhal, J.D. Almer, D.R. Haefner, D.C. Dunand

56 Investigation of Cyclic Impact Fatigue, Grain-to-grain Interaction, and Residual Stress in Zirconia Dental Materials
H. Bale, N. Tamura, J.C. Hanan