# Extreme Mechanics Letters

**Predicting fracture energies and crack-tip fields of soft tough materials**
T. Zhang, S. Lin, H. Yuk and X. Zhao .......................................................... 1

**Digital manufacture of shape changing components**
K. Yu, M.L. Dunn and H.J. Qi ................................................................. 9

**Tunable lotus-leaf and rose-petal effects via graphene paper origami**
C. Cao, Y. Feng, J. Zang, G.P. López and X. Zhao ........................................... 18

**Tension-induced tunable corrugation in two-phase soft composites: Mechanisms and implications**
Q. Chen and A. Elbanna ........................................................................ 26

**Electrostatic converter with an electret-like elastomer membrane for large scale energy harvesting of low density energy sources**
D. Peter, R. Pichler, S. Bauer and R. Schwödiauer ........................................ 38

**Microstructural evolution and surface strengthening of pulse-laser treated Ti/NI multilayer thin films**
Z. Yang, M. Stossel and J. Wang ................................................................. 45

**Phase transforming cellular materials**
D. Restrepo, N.D. Mankame and P.D. Zavattieri ........................................ 52

**A reaction-controlled diffusion model for the lithiation of silicon in lithium-ion batteries**

**The primary bilayer ruga-phase diagram I: Localizations in ruga evolution**
R. Zhao, T. Zhang, M. Diab, H. Gao and K.-S. Kim ..................................... 76

**Development of configurational forces during the injection of an elastic rod**
F. Bosi, D. Misseroni, F. Dal Corso and D. Bigoni ........................................ 83

**Interfacial stiffening of polymer thin films under nanoconfinement**
W. Xia and S. Keten ................................................................................ 89

**Design of planar isotropic negative Poisson’s ratio structures**
S. Shan, S.H. Kang, Z. Zhao, L. Fang and K. Bertoldi .................................. 96

**Tailoring the elastic postbuckling response of cylindrical shells: A route for exploiting instabilities in materials and mechanical systems**
N. Hu and R. Burguerío ........................................................................... 103

[continued on inside back cover]
Extreme Mechanics Letters

Aims and Scope. Extreme Mechanics Letters (EML) enables rapid communication of research that highlights the role of mechanics in multi-disciplinary areas across materials science, physics, chemistry, biology, medicine and engineering. Emphasis is on the impact, depth and originality of new concepts, methods and observations at the forefront of applied sciences.

EML covers experimental, theoretical, and computational mechanics of processes at all size and time scales. Of particular interest is the progress in mechanics that advances the fields of vital importance to the society, including, but not limited to, health science, energy systems, the environment, food and water, climate, and security.

Among the topical areas of interest are:

- Materials of extreme properties, such as exceptional hardness or softness
- Materials under extreme conditions, such as high temperature and high loading rate
- Stretchable, wearable, or implantable electronics for entertainment or healthcare
- Soft robots in manufacturing, surgery and assisted living
- Robots that crawl, run, swim or fly
- Biomimetics that perceive, act, learn and remember
- Active materials in response to mechanical, chemical, electrical, thermal stimuli
- Instability and large deformation in nature and engineering systems
- Force-induced configurational changes of proteins leading to cascades in cellular responses
- Deformation, transport and fracture in high-efficiency batteries
- Interfacial phenomena in interactions between fluids and solids, deformation and failure of materials, and processes of living cells
- Self-assembly of materials and devices
- Thin-membrane origami and kirigami
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Contents—continued from outside back cover

Wide band-gap seismic metastructures
S. Kridel, N. Thomeé and C. Daraio ................................................................. 111

Strain tunable optics of elastomeric microarrays
Z. Li and J. Xiao ......................................................... 118

Fluid extraction from porous media by a slender permeable prolate-spheroid
K.P. Chen ................................................................. 124

Crack tip fields in soft elastic solids subjected to large quasi-static deformation — A review
R. Long and C.-Y. Hui .................................................. 131

Influence of stiffening on elastic wave propagation in extremely deformed soft matter: from nearly incompressible to auxetic materials
P.I. Galich and S. Rud’ikh .................................................. 156

What is the mechanism behind biological ferroelectricity?
M. Zelisko, J. Li and P. Sharma ................................................................. 162

Modelling wrinkling interactions produced by patterned defects in metal thin films
E.A. Flores-Johnson, T.J. Rupert, K.J. Hemker, D.S. Gianola and Y. Gan ................................................................. 175

Biologically enabled micro- and nanostencil lithography using diatoms
J. Cai, X. Wang, A. Li, S.W. Anderson and X. Zhang ........................................ 186

Size and curvature regulate pattern selection in the mammalian brain
S. Budday, P. Steinmann, A. Goriey and E. Kuhl ........................................ 193

Corrigendum to “Push-to-pull tensile testing of ultra-strong nanoscale ceramic–polymer composites
J. Bauer, A. Schroer, R. Schwaiger, I. Tesari, C. Lange, L. Valdevit and O. Kraft ................................................................. 199