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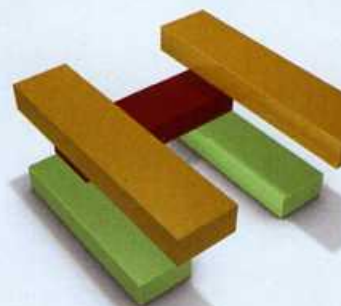
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- 1395 Displacement Above the Hypocenter of the 2011 Tohoku-Oki Earthquake
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Detailed geophysical measurements reveal features of the 2011 Tohoku-Oki megathrust earthquake.
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COVER

Devastation in Rikuzentakada, Miyagi Prefecture, Japan, following the 11 March 2011 magnitude 9.0 Tohoku-Oki earthquake, which triggered a tsunami that killed more than 20,000 people and a nuclear disaster at the Fukushima Daiichi power plant. Three research papers (pp. 1395, 1421, and 1426) describe the mechanics of the earthquake, determined from seismological and geodetic observations.

Photo: Mainichi Newspaper/AFLO/Newscom

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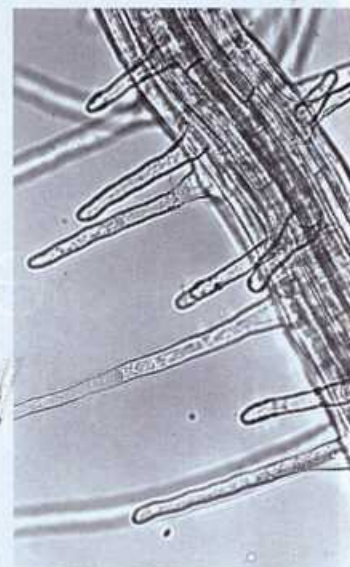
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- 1396 **EPOXI at Comet Hartley 2**
M. F. A'Hearn et al.
 In situ observations show that comet Hartley 2 is an unusually hyperactive comet.
- 1401 **O-Glycosylated Cell Wall Proteins Are Essential in Root Hair Growth**
S. M. Velasquez et al.
 Sequential protein posttranslational modifications facilitate cell wall self-assembly and root hair elongation in *Arabidopsis*.
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- 1404 **Long-Range Topological Order in Metallic Glass**
Q. Zeng et al.
 The pressure-induced formation of a single crystal reveals the metallic glass $Ce_{75}Al_{25}$ to have long-range ordering.
- 1407 **Three-Dimensional Plasmon Rulers**
N. Liu et al.
 The optical response of a fabricated nanostructure can be used to determine distances in three dimensions.
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- 1410 **Direct Observation of Nodes and Twofold Symmetry in FeSe Superconductor**
C.-L. Song et al.
 Scanning tunneling spectroscopy suggests an orbital ordering mechanism for electron pairing in an iron-based superconductor.
- 1413 **Thermal Structure and Dynamics of Saturn's Northern Springtime Disturbance**
L. N. Fletcher et al.
 Satellite and ground-based observations characterize a massive storm on Saturn and its effects on the atmosphere.
- 1417 **The 2010 M_w 8.8 Maule Megathrust Earthquake of Central Chile, Monitored by GPS**
C. Vigny et al.
 Rupture kinematics of this very large earthquake were obtained from high-resolution Global Positioning System data.
 >> *Perspective p. 1390*

- 1421 **The 2011 Magnitude 9.0 Tohoku-Oki Earthquake: Mosaicking the Megathrust from Seconds to Centuries**
M. Simons et al.
- 1426 **Shallow Dynamic Overshoot and Energetic Deep Rupture in the 2011 M_w 9.0 Tohoku-Oki Earthquake**
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 Detailed geophysical measurements reveal features of the 2011 Tohoku-Oki megathrust earthquake.
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- 1429 **TFEB Links Autophagy to Lysosomal Biogenesis**
C. Settembre et al.
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- 1433 **AMPK Is a Direct Adenylate Charge-Regulated Protein Kinase**
J. S. Oakhill et al.
 The cellular energy sensor adenosine monophosphate-activated protein kinase also binds and is regulated by adenosine diphosphate.
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- 1436 **A Molecular Mechanism for Circadian Clock Negative Feedback**
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D. Lu et al.
 Targeted degradation of bacterial sensing proteins keeps plant defenses from running amok.
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- 1443 **SIRT6 Promotes DNA Repair Under Stress by Activating PARP1**
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- 1446 **The Visual Impact of Gossip**
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