COVER
A dynamic aurora borealis during a storm over Canada. Energy from the Sun’s extended atmosphere is stored at Earth’s magnetic field and is released explosively, powering the aurorae. Previously stable aurorae brighten, filament, expand poleward, and cover the sky within 1 to 2 minutes. The energy release starts at an altitude of 130,000 kilometers, at the magnetic equator, near local midnight. See page 931.
Image: Norbert Rosing/National Geographic/Getty Images

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A security system that relies on the superior performance of humans in comparison to computers in reading distorted text can be harnessed for digitized scanned documents.
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An array that can support millions of thin, flexible polymer pens can be used to deposit tiny molecular ink dots of variable size over large areas.
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F. Schmitt et al.
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10.1126/science.1160778

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R. J. Diaz and R. Rosenberg

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J. Yao et al.
An array of silver nanowires placed in a porous alumina matrix forms a three-dimensional material that negatively refracts visible light.
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Tail Reconnection Triggering Substorm Onset
V. Angelopoulos et al.
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Density Multiplication and Improved Lithography by Directed Block Copolymer Assembly
R. Ruiz et al.
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MATERIALS SCIENCE
Graphoepitaxy of Self-Assembled Block Copolymers on Two-Dimensional Periodic Patterned Templates
I. Bita et al.
A substrate patterned with a sparse array of nanoscale posts can direct the self-assembly of block copolymers to create a finely ordered lithographic array, even over a large area.
>> Perspective p. 919
mounts a microRNA-mediated innate immune defense, which is inhibited by proteins of the bacteria, allowing other infections. Upon bacterial infection, L. Navarro, F. Jay, K. Nomura, S. Y. He, O. Voinnet Effector Proteins Suppression of the MicroRNA Pathway by Bacterial MOLECULAR BIOLOGY

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U. Römling
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