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Control of one mobile quantum of excitation by another

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##### Close encounters with full potential

Generating iPS cells at an efficiency of almost 100%

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A highly reproducible martensitic transformation

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A Michael reaction catalysed by a modular PKS enzyme

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Single-cell analysis of chromosome arrangement using the Hi-C technique

Job Dekker & Leonid Mirny

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### MATERIALS SCIENCE

## Cycle route

This new martensitic alloy that cycles reversibly may be ideal for medical, electronic and energy devices. **PAGE 85**



### ON THE COVER

## Mars watch

An artist's conception of an erupting supervolcano on Mars blasting massive amounts of ash into the atmosphere (vertical scale exaggerated). New research suggests that supervolcanoes existed in the Arabia Terra region of Mars — an area not previously considered volcanic terrain. **PAGE 47**

### ARTICLES

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#### 80 MATERIALS SCIENCE Three-dimensional imaging of localized surface plasmon resonances of metal nanoparticles

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#### 85 MATERIALS SCIENCE Enhanced reversibility and unusual microstructure of a phase-transforming material

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#### 89 EARTH SCIENCES Calving fluxes and basal melt rates of Antarctic ice shelves

M A Depoorter et al.

#### 93 EVOLUTION Life history trade-offs at a single locus maintain sexually selected genetic variation

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#### 105 IMMUNOLOGY Podoplanin maintains high endothelial venule integrity by interacting with platelet CLEC-2

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#### 110 CELL BIOLOGY Cyclin A regulates kinetochore microtubules to promote faithful chromosome segregation

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T Bretschneider et al. **SEE N&V P.44**

ILLUSTRATION: MARK GARLICK