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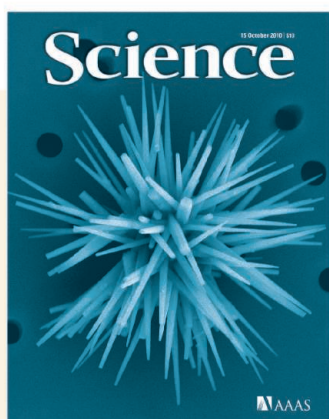


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COVER

False-color scanning electron microscopy image of a cluster of L-cystine crystals captured on a porous filtration membrane after growth in the presence of a growth inhibitor. The tapered needles result from binding of the inhibitor at the crystal surface, which reduces the crystal growth rate and the crystal size (the cluster is ~95 μm across). This suggests that inhibitors might be designed to prevent or limit the formation of L-cystine kidney stones. See page 337.

Image: *Zhihua An and Timothy G. Bromage/New York University*

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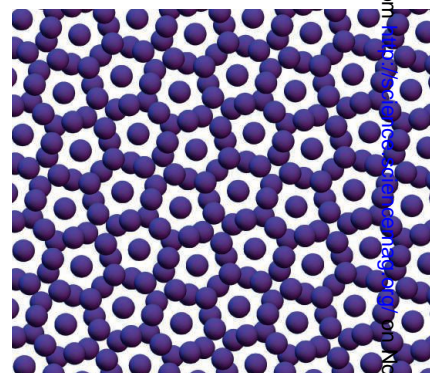
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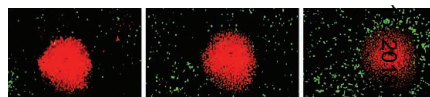
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Broken-Symmetry States in Doubly Gated Suspended Bilayer Graphene

R. T. Weitz et al.

Ferromagnetic quantum Hall states were observed in suspended bilayer graphene samples in both zero and high magnetic fields.

10.1126/science.1194988

Spin-Light Coherence for Single-Spin Measurement and Control in Diamond

B. B. Buckley et al.

Optical pulses were used to nondestructively probe and manipulate the spin state of nitrogen vacancy defects in diamond.

10.1126/science.1196436

A Low-Magnetic-Field Soft Gamma Repeater

N. Rea et al.

A neutron star lacking a strong magnetic field can still emit short bursts of high-energy radiation.

10.1126/science.1196088

PiggyBac Transposon Mutagenesis:

A Tool for Cancer Gene Discovery in Mice

R. Rad et al.

Mutations induced by a transposable element in mice can be used to identify cancer-causing genes.

10.1126/science.1193004

The Role of Discharge Variation in Scaling of Drainage Area and Food Chain Length in Rivers

J. L. Sabo et al.

The lengths of river food chains are indirectly related to drainage area and directly affected by flow and discharge.

10.1126/science.1196005

TECHNICALCOMMENTS

Comment on "Narrow Primary Feather Rachises in *Confuciusornis* and *Archaeopteryx* Suggest Poor Flight Ability"

G. S. Paul

Full text at www.sciencemag.org/cgi/content/full/330/6002/320-b

Comment on "Narrow Primary Feather Rachises in *Confuciusornis* and *Archaeopteryx* Suggest Poor Flight Ability"

X. Zheng et al.

Full text at www.sciencemag.org/cgi/content/full/330/6002/320-c

Response to Comments on "Narrow Primary Feather Rachises in *Confuciusornis* and *Archaeopteryx* Suggest Poor Flight Ability"

R. L. Nudds and G. J. Dyke

Full text at www.sciencemag.org/cgi/content/full/330/6002/320-d

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Canines with a negative outlook tend to become anxious when their owners leave the house.

At the Smallest Scale, Water Is a Sloppy Liquid

Complex shapes and interactions could explain why H₂O is fundamental to life.

Folklore Confirmed: The Moon's Phase Affects Rainfall

Researchers find link between lunar cycles and precipitation.

SCIENCE SIGNALING

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The Signal Transduction Knowledge Environment

EDITORIAL GUIDE: Focus Issue—Endocrine Signaling from Clinic to Cell

N. R. Gough

Understanding the molecular details of the response to endocrine hormones should improve treatment options and approaches.

RESEARCH ARTICLE: Sexually Dimorphic Actions of Glucocorticoids Provide a Link to Inflammatory Diseases with Gender Differences in Prevalence

D. Duma et al.

PERSPECTIVE: Stress and Sex Versus Immunity and Inflammation

G. P. Chrousos

Males and females show different responses to stress and to the anti-inflammatory actions of glucocorticoids.

MEETING REPORT: Signal Transduction in Child Health—Closing the Gap Between Clinical and Basic Research

L. Chan et al.

The New Inroads to Child Health Conference focused on plasma membrane receptor-mediated pathways involved in endocrine signaling.

REVIEW: G Protein-Coupled Receptors in Child Development, Growth, and Maturation

A. C. Latronico and Z. Hochberg

Mutations in GPCRs are associated with several disorders that affect the development and maturation of children and adolescents.

PRESENTATION: Hormone Resistance at the Clinical Level

Z. Hochberg

Molecular defects at various steps in hormone production, signaling, or responsiveness can cause disease.

SCIENCE CAREERS

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Free Career Resources for Scientists

Tooling Up: Choosing the Best Fit

D. Jensen

If there isn't good chemistry between you and the company, a job offer can be an offer of entrapment.

In Person: Finding a Path From Oceanography to a Science Communication Career

R. Pidcock

Partway through her Ph.D., Roz Pidcock realized she wanted to talk and write about science, not do it herself.

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Integrating Medicine and Science

COMMENTARY: Strategies for Translational Research in the United Kingdom

K. Soderquist and G. M. Lord

Heavy investment in UK translational research has improved infrastructure and advanced clinical medicine.

PERSPECTIVE: Network Dynamics to Evaluate Performance of an Academic Institution

M. E. Hughes et al.

A research collaboration network helps in assessing an institution receiving a translational science award.

RESEARCH ARTICLE: A Defined Tuberculosis Vaccine Candidate Boosts BCG and Protects Against Multidrug-Resistant *Mycobacterium tuberculosis*

S. Bertholet et al.

A fusion peptide vaccine of four *Mycobacterium tuberculosis* proteins boosts an existing vaccine and protects against drug-resistant TB.

RESEARCH ARTICLE: PTEN Deficiency in Endometrioid Endometrial Adenocarcinomas Predicts Sensitivity to PARP Inhibitors

K. J. Dedes et al.

Endometrial cancer cells lacking the PTEN tumor suppressor are sensitive to drugs that block the PARP enzyme.

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