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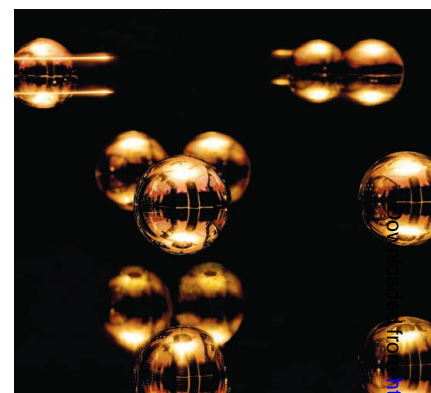
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- 1311** Epigenetic Licensing of Germline Gene Expression by Maternal RNA in *C. elegans*
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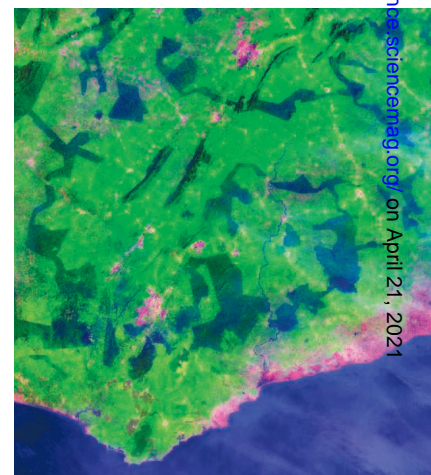
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Light Propagation with Phase Discontinuities: Generalized Laws of Reflection and Refraction
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Light propagation can be controlled with plasmonic interfaces that introduce abrupt phase shifts along the optical path.

10.1126/science.1210713

Linking Long-Term Dietary Patterns with Gut Microbial Enterotypes

G. D. Wu et al.

The basic composition of the human gut microbiome is influenced by long-term diet: high fat and protein versus high fiber.

10.1126/science.1208344

ER Tubules Mark Sites of Mitochondrial Division
J. R. Friedman et al.

Mitochondrial division occurs at positions where endoplasmic reticulum tubules contact mitochondria and mediate constriction.

10.1126/science.1207385

Glutamatergic and Dopaminergic Neurons Mediate Anxiogenic and Anxiolytic Effects of CRHR1

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Imbalance in the bidirectional role of corticotropin-releasing hormone receptor 1 in anxiety might lead to emotional disorders.

10.1126/science.1202107

Implementing the Quantum von Neumann Architecture with Superconducting Circuits
M. Mariantoni et al.

A quantum version of a central processing unit was created with superconducting circuits and elements.

10.1126/science.1208517

Universal Digital Quantum Simulation with Trapped Ions

B. P. Lanyon et al.

A series of trapped calcium ions was used to simulate the complex dynamics of an interacting spin system.

10.1126/science.1208001

TECHNICALCOMMENTS

Comment on "Additive Genetic Breeding Values Correlate with the Load of Partially Deleterious Mutations"

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Full text at www.sciencemag.org/cgi/content/ful/333/6047/1221-b

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SCIENCENOW

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Highlights From Our Daily News Coverage

'Time Cells' Weave Events Into Memories

Neurons in the hippocampus keep track of empty moments.

<http://scim.ag/timecells>

'Jurassic Mother' Found in China

An ancestor of placental mammals appeared while dinosaurs roamed.

<http://scim.ag/Jurassicmom>

Mind-Altering Bugs

Bacteria in the gut alter brain chemistry and behavior in mice.

<http://scim.ag/mind-altering>

SCIENCE SIGNALING

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The Signal Transduction Knowledge Environment

30 August issue: <http://scim.ag/ss083011>

RESEARCH ARTICLE: AKT Promotes rRNA Synthesis and Cooperates with c-MYC to Stimulate Ribosome Biogenesis in Cancer

J. C. Chan et al.

In addition to promoting translation, AKT also stimulates protein synthesis and cell growth by enhancing ribosome biogenesis.

REVIEW: Inositol Pyrophosphates as Mammalian Cell Signals

A. Chakraborty et al.

Identification and knockout of their biosynthetic enzymes has shed light on the diverse functions of the inositol pyrophosphates.

PRESENTATION: Merlin/NF2 Functions Upstream of the Nuclear E3 Ubiquitin Ligase CRL4^{DCAF1} to Suppress Oncogenic Gene Expression

J. Cooper et al.

The closed conformer of Merlin inhibits tumorigenesis by inhibiting a ubiquitin ligase implicated in promoting cell cycle progression and inhibiting growth arrest, apoptosis, and adhesion.

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Integrating Medicine and Science

31 August issue: <http://scim.ag/stm083111>

RESEARCH ARTICLE: Identification of a Disease-Defining Gene Fusion in Epithelioid Hemangioendothelioma

M. R. Tanas et al.

PERSPECTIVE: Understanding the Enemy

V. E. Velculescu and L. A. Diaz Jr.

A genomics approach shortens the path to discovery of a diagnostic gene fusion for a specific vascular cancer.

RESEARCH ARTICLE: A Computational Model to Predict the Effects of Class I Anti-Arrhythmic Drugs on Ventricular Rhythms

J. D. Moreno et al.

Two- and three-dimensional models of cardiac excitability based on sodium-channel kinetics can predict the adverse effects of class I anti-arrhythmic drugs.

RESEARCH ARTICLE: Noninvasive Electroanatomic Mapping of Human Ventricular Arrhythmias with Electrocardiographic Imaging (ECGI)

Y. Wang et al.

FOCUS: Imaging Cardiac Arrhythmias

K. Shivkumar and S. M. Narayan

Electrocardiographic imaging can noninvasively provide an activation map of the heart's surface to help treat arrhythmias.

SCIENCE CAREERS

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What Is Wrong With High-Skill Immigration Policy?

B. L. Benderly

A Senate hearing highlights the split between institutions' and workers' interests.

http://scim.ag/TFG_Skilled

A Father-and-Son Journey Into Synthetic Biology

E. Pain

Justin Siegel rationally engineered unnatural enzymes partly thanks to technology his dad helped develop.

<http://scim.ag/JustinSiegel>

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SCIENCE PODCAST

www.sciencemag.org/multimedia/podcast

Free Weekly Show

On the 2 September *Science* Podcast: a special show all about synthetic biology, from clinical applications and regulatory issues to the do-it-yourself biology movement.

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