Optical vortices emitted by an array of silicon ring resonators. The helical phase fronts, indicated by spirals, denote photons with orbital angular momentum. Emission results from the embedded angular gratings that extract the light waves traveling around the ring. The small emitters (diameter: 8 micrometers) can be integrated on a large scale into photonic integrated circuits, enabling new applications in optical communications and sensing, quantum photonics, and lab-on-a-chip. See page 363.

Image: Yue Zhang (ciel924@126.com), based on data from Xinlun Cai, Jiangbo Zhu, and Siyuan Yu
REVIEW
344 Anticipating Critical Transitions
M. Scheffer et al.

RESEARCH ARTICLE
349 Transcriptional Architecture and Chromatin Landscape of the Core Circadian Clock in Mammals
N. Koike et al.
A 1-day reconstruction of transcriptional events reveals the influence of the circadian clock across the genome.
>> Perspective p. 338; Report p. 379

REPORTS
355 Jet-Launching Structure Resolved Near the Supermassive Black Hole in M87
S. S. Doeleman et al.
High-resolution observations of the jet in the galaxy M87 probe structures very close to the galaxy’s central black hole.

358 Self-Assembled Colloidal Superparticles from Nanorods
T. Wang et al.
Colloidal rods self-assemble into semiconducting superparticles with a shape controlled by the number of rods.

363 Integrated Compact Optical Vortex Beam Emitters
X. Cai et al.
Microring resonators embedded with angular gratings are used to generate orbital angular momentum states of light.
>> Science Podcast

366 Lethally Hot Temperatures During the Early Triassic Greenhouse
Y. Sun et al.
Global warming during the Early Triassic was so severe that equatorial latitudes were uninhabitable for many plants and animals.
>> Perspective p. 336

370 A Complete Terrestrial Radiocarbon Record for 11.2 to 52.8 kyr B.P.
C. Bronk Ramsey et al.
Radiocarbon measurements of samples from Lake Suigetsu, Japan, extend the 14C time scale back to more than 50,000 years ago.
>> Perspective p. 337

374 Genomic Variation in Seven Khoe-San Groups Reveals Adaptation and Complex African History
C. M. Schlebusch et al.
Cutting-edge genomic approaches test hypotheses about the roots of human history in southern African indigenous populations.

379 Cold-Inducible RNA-Binding Protein Modulates Circadian Gene Expression Posttranscriptionally
J. Morf et al.
An RNA-binding protein whose cyclic accumulation is regulated by body temperature confers robustness to circadian oscillators.
>> Perspective p. 338; Research Article p. 349

384 Real-Time Evolution of New Genes by Innovation, Amplification, and Divergence
J. Näsvald et al.
Experimental validation of how new genes with divergent functions can evolve within a few thousand generations is described.
>> News story p. 316

387 Metagenome Mining Reveals Polytheonamides as Posttranslationally Modified Ribosomal Peptides
M. F. Freeman et al.
Large toxins that comprise many modified and D-amino acids are ribosomally synthesized and then derivatized.

390 Processing and Subcellular Trafficking of ER-Tethered EIN2 Control Response to Ethylene Gas
H. Qiao et al.
The plant hormone ethylene triggers cleavage and translocation to the nucleus of a signaling component.

394 Mutations in BCKD-kinase Lead to a Potentially Treatable Form of Autism with Epilepsy
G. Novarino et al.
When the balance of branched-chain amino acids transported into the brain goes awry, neurological deficits can ensue.
>> Perspective p. 342

397 Direct Observation of Cotranscriptional Folding in an Adenine Riboswitch
K. L. Frieda and S. M. Block
Individual RNA transcripts are observed as they emerge from RNA polymerase and begin to fold into functional forms.

CONTENTS continued >>
SCIENCEEXPRESS
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Making the Moon from a Fast-Spinning Earth: A Giant Impact Followed by Resonant Despinning
M. Cuk and S. T. Stewart
10.1126/science.1225542
>> Science Podcast

Forming a Moon with an Earth-like Composition via a Giant Impact
R. M. Canup
10.1126/science.1226073

Redifferentiation of Neurons and Astrocytes by Oncogenes Can Induce Gliomas in Mice
D. Friedmann-Morvinski et al.
10.1126/science.1226929

Structural Basis of Transcription Initiation
Y. Zhang et al.
10.1126/science.1227786

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J. Lorang et al.
10.1126/science.1226743

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K. E. Keller et al.
10.1126/science.1224409

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The Signal Transduction Knowledge Environment
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RESEARCH ARTICLE: TWEAK and cLAP1 Regulate Myoblast Fusion Through the Noncanonical NF-κB Signaling Pathway
E. Enwere et al.
Muscle fiber formation from progenitor cells is dependent on noncanonical NF-κB signaling.

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T. Tarnita et al.
Imagining kinase activity in neurons of living worms reveals the complexity in the response.

PERSPECTIVE: The Response of Cancers to BRAF Inhibition Underscores the Importance of Cancer Systems Biology
E. C. Stites
Targeting the receptor and a mutant component may be an effective colon cancer treatment.

REVIEW: The Hedgehog Signal Transduction Network
D. J. Robbins et al.
Canonical and noncanonical Hedgehog signaling modules are important in health and disease.

PRESENTATION: Neurosteroids and Microneurotrophins Signal Through NGF Receptors to Induce Prosurvival Signaling in Neuronal Cells
A. Grawans et al.
Synthetic DHEA analogs promote neuronal survival without estrogenic or androgenic side effects.

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17 October issue: http://scim.ag/stm101712

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R. Chugh et al.

PERSPECTIVE: Pancreas Cancer Meets the Thunder God
S. R. Hingorani and J. D. Potter
Minnelide is a new potential treatment for pancreatic cancer.

RESEARCH ARTICLE: A Translational Paradigm for the Preclinical Evaluation of the Stroke Neuroprotectant Tat-NR289c in Gyrencephalic Nonhuman Primates
D. J. Cook et al.

PERSPECTIVE: Sisyphus and Translational Stroke Research
P. Lyden and P. Lapchak
Primates treated with a neuroprotectant after stroke showed outcomes that mimicked those of a human trial.

RESEARCH ARTICLE: Methylation Subtypes and Large-Scale Epigenetic Alterations in Gastric Cancer
H. Zouridis et al.
A survey of epigenetic alterations in gastric cancer identifies clinically relevant subgroups.

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V. Venkatraman
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