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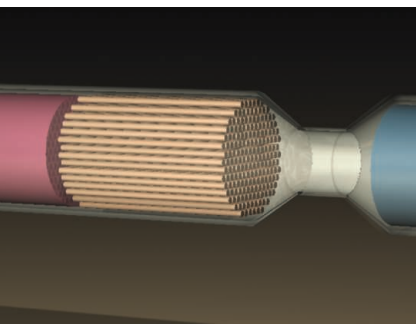

COVER

Recycling aluminum cans (shown here in bales at a facility in Philadelphia, PA) is just one of the many approaches directed toward doing something productive with the world's ever-expanding stream of waste. In the special section Working with Waste (page 662), we survey multifaceted efforts to tackle this global challenge. For the story behind the cover, go to <http://scim.ag/cov6095>.

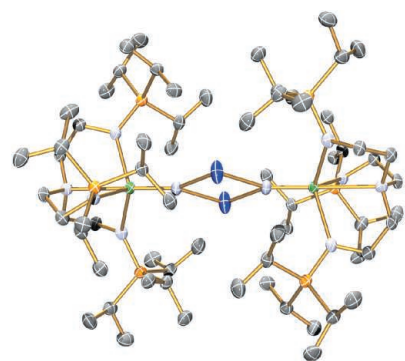
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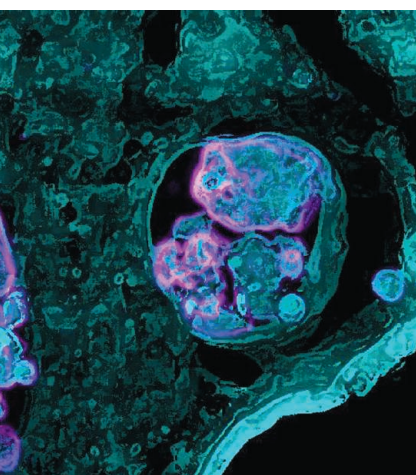
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A region of the thalamus synchronizes neuronal firing in two cortical areas and thus allocates attention.

SCIENCEONLINE

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Direct Mapping of Nuclear Shell Effects in the Heaviest Elements

E. Minaya Ramirez et al.

Highly precise mass measurements of nobelium and lawrencium isotopes provide insight into superheavy element stability.

10.1126/science.1225636

Adaptive Sleep Loss in Polygynous Pectoral Sandpipers

J. A. Lesku et al.

Male sandpipers spend their Arctic days mating instead of sleeping.

10.1126/science.1220939

Loss of the Tumor Suppressor BAP1 Causes Myeloid Transformation

A. Dey et al.

The deubiquitinating enzyme BAP1 is implicated in myelodysplastic syndrome.

10.1126/science.1221711

Highly Conserved Protective Epitopes on Influenza B Viruses

C. Dreyfus et al.

Three broadly neutralizing human monoclonal antibodies protect mice against influenza B.

10.1126/science.1222908

Conformational Control of the Ste5 Scaffold Protein Insulates Against MAP Kinase Misactivation

J. G. Zalatan et al.

A scaffold protein controls signal transmission by using an auto-inhibitory domain as a gate.

10.1126/science.1220683

TECHNICALCOMMENTS

Comment on "Impaired Respiratory and Body Temperature Control Upon Acute Serotonergic Neuron Inhibition"

S. Löffler et al.

Full text at www.sciencemag.org/cgi/content/ful/337/6095/646-b

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S. M. Dymecki et al.

Full text at www.sciencemag.org/cgi/content/ful/337/6095/646-c

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Highlights From Our Daily News Coverage

Starbucks of Ancient America?

Native peoples traded a highly caffeinated 'black drink' at least 700 years ago.

<http://scim.ag/Black-Drink>

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A study fills in the genetic map of Jewish history.

<http://scim.ag/Jewish-History>

Mars Rover Already Doing Science

New observations roll in just minutes after Curiosity's touchdown.

<http://scim.ag/Mars-Rover>

SCIENCE SIGNALING

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The Signal Transduction Knowledge Environment

7 August issue: <http://scim.ag/ss080712>

RESEARCH ARTICLE: Microtubules Underlie Dysfunction in Duchenne Muscular Dystrophy

R. J. Khairallah et al.

PODCAST

C. W. Ward et al.

Decreasing microtubule density reduces contraction-induced muscle injury.

RESEARCH ARTICLE: Nucleolar Localization of a Netrin-1 Isoform Enhances Tumor Cell Proliferation

C. Delloye-Bourgeois et al.

A nuclear-localized isoform of netrin may enhance ribosome biogenesis to promote cancer growth.

REVIEW: The Abluminal Endothelial Membrane in Neurovascular Remodeling in Health and Disease

D. M. Hermann and A. ElAli

Understanding brain vascular remodeling may allow effective intervention in cases of injury or disease that disrupt the blood-brain barrier.

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Integrating Medicine and Science

8 August issue: <http://scim.ag/stm080812>

RESEARCH ARTICLE: A Hendra Virus G Glycoprotein Subunit Vaccine Protects African Green Monkeys from Nipah Virus Challenge

K. N. Bossart et al.

The Hendra virus attachment G glycoprotein fully protects nonhuman primates from lethal Nipah virus challenge.

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RESEARCH ARTICLE: Selective Activation of Adenosine A_{2A} Receptors on Immune Cells by a CD73-Dependent Pro-Drug Suppresses Joint Inflammation in Experimental Rheumatoid Arthritis

U. Flögel et al.

PERSPECTIVE: The Outsiders—Emerging Roles of Ectonucleotidases in Inflammation

C. Szabo and P. Pacher

Phosphorylated adenosine A_{2A} receptor agonists suppressed inflammation in a model of arthritis without A_{2A}-mediated vasodilatory side effects.

RESEARCH ARTICLE: Instructive Nanofiber Scaffolds with VEGF Create a Microenvironment for Arteriogenesis and Cardiac Repair

Y.-D. Lin et al.

FOCUS: Treating the Leading Killer

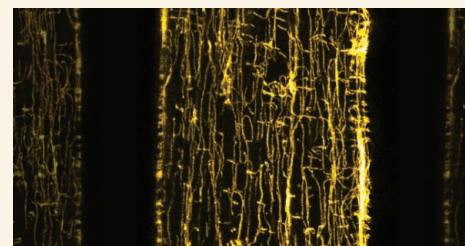
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An intramyocardial microenvironment was created using nanofibers and VEGF for endogenous cardiac repair after infarction.

RESEARCH ARTICLE: A Combination of Buprenorphine and Naltrexone Blocks Compulsive Cocaine Intake in Rodents Without Producing Dependence

S. Wee et al.

An opioid agonist and antagonist, given together, decrease cocaine abuse in rodents without causing dependence and provide a potential treatment for cocaine addiction.



SCIENCE SIGNALING
Muscle microtubule network.

SCIENCE CAREERS

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Free Career Resources for Scientists

Taken for Granted: Crossing the Rubicon

B. L. Benderly

By admitting responsibility for the conditions that caused Sheri Sangji's death, the University of California takes a step toward better lab safety.
http://scim.ag/TFG_Rubicon

Perspective: Science Training and Mental Health

M. P. DeWhyse

In the wake of the Colorado shootings, the scientific community should pay more attention to the psychological well-being of emerging scientists.
http://scim.ag/Training_MentalHealth

Gambling on Transformative Research

E. Pain

Scientists with the right skills and attitude find limited but increasing opportunities to pursue high-risk, high-reward research.
<http://scim.ag/GamblingTransformative>

SCIENCE PODCAST

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On the 10 August Science Podcast: Garbology 101, challenges in metal recycling, the "yuck factor," and an end to waste.

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