**COVER**

The Ginza area of Tokyo in 2006. By 2030 the number of urban dwellers will have exploded to 4.8 billion people, roughly 60 percent of the projected world population, whereas only 13 percent lived in cities in 1900. The special section beginning on page 739 includes News stories, Reviews, and Perspectives that explore the ramifications of urban transformation.

*Photo: Getty Images*

**SPECIAL SECTION**

**Cities**

**INTRODUCTION**

Reimagining Cities

**NEWS**

China’s Living Laboratory in Urbanization
Calming Traffic on Bogotá’s Killing Streets
Durban’s Poor Get Water Services Long Denied
Pipe Dreams Come True
Rebuilt From Ruins, a Water Utility Turns Clean and Pure
Living in the Danger Zone
Choking on Fumes, Kolkata Faces a Noxious Future
From Gasoline Alleys to Electric Avenues
Unclogging Urban Arteries
Upending the Traditional Farm
Imagining a City Where (Electrical) Resistance Is Futile
Money—With Strings—to Fight Poverty
Building on a Firm Foundation

**REVIEWS**

ECOLOGY: Global Change and the Ecology of Cities
* N. B. Grimm et al.

ECONOMICS: Urbanization and the Wealth of Nations
* D. E. Bloom, D. Canning, G. Fink

**PERSPECTIVES**

The Urban Transformation of the Developing World
* M. R. Montgomery

Reproducing in Cities
* R. Mace

Health and Urban Living
* C. Dye

The Size, Scale, and Shape of Cities
* M. Batty

**NEWS OF THE WEEK**

Kenyan Scientists Endure Violent Unrest, University Closings
Lifting the Veil on Traditional Chinese Medicine
Exotic Disease of Farm Animals Tests Europe’s Responses

**SCIENCESCOPE**

Prizes Eyed to Spur Medical Innovation

**NEWS FOCUS**

A Science Budget of Choices and Chances
A Broken Record?
Near-Term Energy Research Prosper
NIH Hopes for More Mileage From Roadmap
Earth Gets a Closer Look
Can the Upstarts Top Silicon?
MESSENGER Flyby Reveals a More Active and Stranger Mercury
Berkeley Hyenas Face an Uncertain Future

**EDITORIAL**

Science for the Globe
by David Baltimore

>> Editorial p. 697; for related online material, see p. 691 or go to www.sciencemag.org/cities
PLANT SCIENCE

TOPLESS Mediates Auxin-Dependent Transcriptional Repression During Arabidopsis Embryogenesis
H. Szemenyei, M. Hannon, J. A. Long
A transcriptional co-repressor is part of the protein complex that inhibits developmental gene activation in Arabidopsis until the growth hormone auxin triggers its degradation.
10.1126/science.1152747

NEUROSCIENCE

Synaptic Protein Degradation Underlies Destabilization of Retrieved Fear Memory
S.-H. Lee et al.
Upon recollection, mouse memories of fearful situations become labile, as postsynaptic proteins are degraded by proteosomes and are then reconsolidated via protein synthesis.
10.1126/science.1150541
A knee-mounted device can generate several watts of power at the end of each leg swing in a process similar to regenerative braking in hybrid cars. J. M. Donelan

A mouse cell-surface protein exports excess heme, which is toxic when free in the cytoplasm, ensuring normal red blood cell maturation and systemic iron balance. S. B. Keel et al.

Like a lattice fence, a silver-based framework material expands greatly in one direction upon heating, while contracting even more in the orthogonal direction. A. L. Goodvin et al.

Exciting the CH bond in CHD$_3$ just before it collides with a nickel surface minimizes dissipation of the collision energy throughout the molecule, allowing selective bond scission. D. R. Killelea et al.

Three-dimensional fluorescence images of cellular structures in fixed cells are realized at 20- to 30-nanometer lateral and 50-nanometer axial resolution, without scanning. B. Huang et al.

Exciting the CH bond in CHD$_3$, just before it collides with a nickel surface minimizes dissipation of the collision energy throughout the molecule, allowing selective bond scission. D. R. Killelea et al.

Exciting the CH bond in CHD$_3$, just before it collides with a nickel surface minimizes dissipation of the collision energy throughout the molecule, allowing selective bond scission. D. R. Killelea et al.

Exciting the CH bond in CHD$_3$, just before it collides with a nickel surface minimizes dissipation of the collision energy throughout the molecule, allowing selective bond scission. D. R. Killelea et al.

Exciting the CH bond in CHD$_3$, just before it collides with a nickel surface minimizes dissipation of the collision energy throughout the molecule, allowing selective bond scission. D. R. Killelea et al.
SCIENCE SIGNALING

www.stke.org THE SIGNAL TRANSDUCTION KNOWLEDGE ENVIRONMENT

PERSPECTIVE: Novel Roles for the NF-κB Signaling Pathway in Regulating Neuronal Function

M. C. Boersma and M. K. Meffert
Components of the NF-κB pathway may use multiple mechanisms to influence synaptic plasticity, learning, and memory.

PERSPECTIVE: Exosomes Secreted by Bacterially Infected Macrophages Are Proinflammatory

H. C. O’Neill and B. J. C. Quah
The release of bacterial components in vesicles secreted by infected macrophages helps promote inflammation.

SCIENCE CAREERS

www.sciencecareers.org CAREER RESOURCES FOR SCIENTISTS

Special Feature: Mentoring

E. Pain
What makes mentoring relationships successful?

A Gift That Keeps On Giving

S. Webb
An industry mentor helped physicist Joan Hoffmann navigate graduate school and launch her career.

Mentoring Opposites

C. Wold
A mentor and student turned their differences into strengths as they became scientific collaborators.

From the Archives: The Commandments of Cover Letter Creation

P. Fiske
A good cover letter highlights your qualifications and guides readers through the most important parts of your work history.

SCIENCE PODCAST

Download the 8 February Science Podcast to hear about greenhouse emissions from biofuel-dedicated land, the 2009 U.S. science budget, good mentoring relationships, reproducing in cities, and more.

www.sciencecareers.org

CREDITS: (SCIENCE CAREERS) JOHN WIGHAM/CREATIVE COMMONS

www.sciencemag.org

8 FEBRUARY 2008

691