Juno starts its watch over Jupiter

Not far from downtown Rio de Janeiro, ecologists plot a forest comeback.

NEWS

IN BRIEF

104 News at a glance

IN DEPTH

106 PANEL SLAMS PLAN FOR HUMAN RESEARCH RULES
National Academies report urges creation of new national commission on ethical studies By D. Malakoff

107 LONG-DELAYED NUCLEAR CENTER LOOKS SET FOR CONSTRUCTION
FAIR moves ahead despite remaining budget shortfalls By E. Cartlidge

108 TITANIC BALLOON SETS RECORD AND TANTALIZES SCIENTISTS
Curtailed flight highlights remaining challenges of “superpressure” balloon technology By P. Monahan

109 MASSIVE HELIUM FIELDS FOUND IN Rift Zone of Tanzania
Commercial development could struggle in a stabilizing market for the world’s best coolant By E. Hand

110 HEARTMAKERS NEXT STEP: A Ray ‘BIOHYBRID’
Light-controlled cardiac muscle cells guide swimming of raybot By E. Pennisi

FEATURES

112 IN CANADA, PEER-REVIEW CHANGES STIR OUTRAGE
Reforms by nation’s lead biomedical funder result in shoddy reviews, critics say By W. Kondro

113 REWILDING RIO
A team of ecologists is recreating a living rainforest in the heart of the Olympic city By H. Escobar

116 HURDLING OBSTACLES
Meet Marcia McNutt, scientist, administrator, editor, and now National Academy of Sciences president By E. Ruppel Shell

INSIGHTS

PERSPECTIVES

120 LEARNING TO MOVE ON LAND
Interdisciplinary research suggests that early four-limbed vertebrates relied on their tails By J. A. Nyakatura

121 MOLECULAR SIEVES FOR GAS SEPARATION
Metal-organic framework materials enable efficient separation of similar gases By J. Y. S. Lin

BOOKS ET AL.

128 THIS IS YOUR BRAIN ON PARASITES
By K. McAuliffe, reviewed by S. Adamo

129 EARTH-SHATTERING EVENTS
By A. Robinson, reviewed by S. D’Amico

POLICY FORUM

126 THE GENOME PROJECT–WRITE
We need technology and an ethical framework for genome-scale engineering By J. D. Boeke et al.

REPORTS

104 JUNO STARTS ITS WATCH OVER JUPITER
PHOTOS: (TOP RIGHT) NASA; (TOP LEFT) LUCIANO CANDISANI

113 NETWORK ANALYTICS IN THE AGED OF BIG DATA
How can we holistically mine big data? By N. Pržulj and N. Malod-Dognin

124 SOLAR-POWERING THE INTERNET OF THINGS
Photovoltaics can help to power remote sensors and controllers at the edge of the Internet By R. Haight et al.