REVIEW
823 The Consequence of Tree Pests and Diseases for Ecosystem Services
I. L. Boyd et al.
Review Summary; for full text: http://dx.doi.org/10.1126/science.1235773

RESEARCH ARTICLES
824 Molecular Architecture of a Eukaryotic Translational Initiation Complex
I. S. Fernandez et al.
Cryo-electron microscopy allows the rapid analysis of a yeast ribosome-initiator complex from a tiny data set.
Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1240585

825 Iron(IV)hydroxide pK,a and the Role of Thiolate Ligation in C–H Bond Activation by Cytochrome P450
T. H. Ysca et al.
The basicity of an iron o xo intermediate helps explain what keeps P450 enzymes from oxidizing their own backbone.

REPORTS
830 Room-Temperature Quantum Bit Storage Exceeding 39 Minutes Using Ionized Donors in Silicon-28
K. Saedi et al.
Isotopically purified silicon is used to extend the coherence time of qubits based on phosphorus impurities.

833 Layer-Resolved Graphene Transfer via Engineered Strain Layers
J. Kim et al.
A two-step exfoliation process allows multiple transfers of oriented monolayer graphene from a silicon carbide surface.

836 High-Performance Silicon Photoanodes Passivated with Ultrathin Nickel Films for Water Oxidation
M. J. Kenney et al.
A nickel coating renders silicon stable in alkaline lithium borate electrolyte for solar water-splitting applications.

840 Enantioselective Lewis Acid Catalysis of Intramolecular Enone [2+2] Photocycloaddition Reactions
R. Brimioulle and T. Bach
A catalyst attains selectivity in a photochemical reaction by shifting the absorption wavelength of its complexed substrate.

843 Abrupt Shifts in Horn of Africa Hydroclimate Since the Last Glacial Maximum
J. E. Tierney and P. B. deMenocal
The mid-Holocene African Humid Period ended abruptly, within centuries rather than millennia, in the Horn of Africa.

846 Dosage Compensation via Transposable Element Mediated Rewiring of a Regulatory Network
C. E. Ellison and D. Bachtrog
Transposable elements facilitated functional specialization of recently evolved X chromosomes in fruit flies.

850 High-Resolution Global Maps of 21st-Century Forest Cover Change
M. C. Hansen et al.
Landsat data reveals details of forest losses and gains across the globe on an annual basis from 2000 to 2012.

853 Changes in Cytoplasmic Volume Are Sufficient to Drive Spindle Scaling
J. Hazel et al.
Cytoplasmic Volume Modules Spindle Size During Embryogenesis
M. C. Good et al.
Microfluidic techniques reveal how mitotic spindle size is regulated by titratable cytosolic factors.

860 ERF115 Controls Root Quiescent Center Cell Division and Stem Cell Replenishment
J. Heyman et al.
Restrained growth of a key root tip region involves an interplay between hormonal activation and transcription factor levels.

863 Staphylococcus aureus Degrades Neutrophil Extracellular Traps to Promote Immune Cell Death
V. Thammavongsa et al.
Enzymes secreted by a bacterial pathogen turn immune responses against themselves.

866 Phosphoinositide 3-Kinase δ Gene Mutation Predisposes to Respiratory Infection and Airway Damage
I. Angulo et al.
Gene sequencing of unrelated patients with recurrent airway infections identifies a common underlying mutation.

871 Complete Mitochondrial Genomes of Ancient Canids Suggest a European Origin of Domestic Dogs
O. Thalmann et al.
Ancient DNA suggests that dog domestication was complex and likely originated in Europe.

CONTENTS
Science 342 (6160), 776-875.