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Cover
This elegantly carved jade face from Liangzhu in southeastern China provides an intriguing glimpse into the beliefs of the people who lived there from 3400 B.C.E. to 2250 B.C.E. As described in a special News Focus section beginning on page 930, discoveries at Liangzhu and other regions far from the traditional heartland of Chinese civilization are revealing surprisingly complex ancient cultures that thrived in far-flung regions of China.

Photo: Liu Bin/Archaeological Institute of Zhejiang Province
BREVIA

Deep-Sea, Swimming Worms with Luminous "Bombs"
K. J. Osborn et al.
Several species of deep-sea polychaete worms have been discovered that have a bizarre predator distraction mechanism.

DICER1 Mutations in Familial Pleuropulmonary Blastoma
D. A. Hill et al.
A rare form of lung cancer in children is associated with mutational disruption of an enzyme that generates small noncoding RNAs.

RESEARCH ARTICLE

Formation of the First Peptide Bond: The Structure of EF-P Bound to the 70S Ribosome
G. Blaha et al.
Elongation factor P binds to the ribosome so as to position the initiator transfer RNA for the first bond formation.

REPORTS

Exploring Dark Matter with Milky Way Substructure
M. Kuhlen et al.
Simulations reveal that dark matter in our Galaxy could be detected by the Fermi space telescope.

Light-Induced Spontaneous Magnetization in Doped Colloidal Quantum Dots
R. Beaulac et al.
Long-lifetime excited states created by quantum confinement effects enable the light-induced magnetization of a quantum dot.

Printed Assemblies of Inorganic Light-Emitting Diodes for Deformable and Semitransparent Displays
S.-I. Park et al.
Methods to fabricate and assemble inorganic light-emitting diodes provide a route toward transparent, flexible, or stretchable display devices.

Visualization of Fermi's Golden Rule Through Imaging of Light Emission from Atomic Silver Chains
C. Chen et al.
A correlation of photon emission and scanning tunneling microscopy images illustrates a fundamental quantum principle.

Homogeneous Distribution of $^{26}$Al in the Solar System from the Mg Isotopic Composition of Chondrules
J. Villeneuve et al.
High-precision isotopic analyses in chondrule minerals validate the use of $^{26}$Al as an early solar system chronometer.

Adjoint Tomography of the Southern California Crust
C. Tappe et al.
Analysis of seismic data using a more realistic crustal model reveals detailed variations in density beneath southern California.

Bacteriophages Encode Factors Required for Protection in a Symbiotic Mutualism
K. M. Oliver et al.
A virus endows a bacterial symbiont of an aphid with virulence factors that kill parasitoid wasps.

An Expressed Fgf4 Retrogene Is Associated with Breed-Defining Chondrodysplasia in Domestic Dogs
H. G. Parker et al.
The short legs that characterize certain dog breeds are associated with a gene that arose recently by RNA-based gene duplication.

Loss of Function of a Proline-Containing Protein Confers Durable Disease Resistance in Rice
S. Fukuoka et al.
Quantitative trait loci may offer a particularly durable strategy for disease resistance.

Bcl6 Mediates the Development of T Follicular Helper Cells
R. I. Nurieva et al.

Bcl6 and Blimp-1 Are Reciprocal and Antagonistic Regulators of T Follicular Helper Cell Differentiation
R. J. Johnston et al.
The transcription factors that regulate follicular T helper cell differentiation are identified.

Structure and Mechanism of a Na$^+$-Independent Amino Acid Transporter
P. L. Shaffer et al.
The structure of the transporter ApcT reveals common architectural principles between proton- and sodium-coupled transporters.

Structures of the Ribosome in Intermediate States of Ratcheting
W. Zhang et al.
Structures of the Escherichia coli 70S ribosome show how the large and small subunits rotate to facilitate protein synthesis.

Dopamine Controls Persistence of Long-Term Memory Storage
J. I. Rossato et al.
Pharmacological and biochemical analyses reveal that dopamine determines the duration of fear memory storage.

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G. Miller et al.
Reactive oxygen species produced by RBOHD mediate rapid, long-distance stress signals in plants.

RESEARCH ARTICLE: Quantitative Phosphoproteomic Analysis of T Cell Receptor Signaling Reveals System-Wide Modulation of Protein-Protein Interactions
V. Maya et al.
Serine-threonine phosphorylation plays a role in regulating the interactions among proteins involved in T cell responses.

RESEARCH ARTICLE: Mitofusin 2 Inhibits Mitochondrial Antiviral Signaling
K. Yasukawa et al.
A protein that mediates mitochondrial fusion also suppresses innate immune responses to viral infection.

PERSPECTIVE: miRNA Regulation Through Ligand Occupancy of a Nuclear Hormone Receptor
A. E. Rougvie
Ligand occupancy of DAF-12 determines whether transcription of let-7 family miRNAs occurs during C. elegans development.

PODCAST
D. K. Han and A. M. VanHook
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SCIENCE SIGNALING
Eos Mediates Foxp3-Dependent Gene Silencing
Z. Chen et al.
A transcription factor required for gene suppression in regulatory T cells is identified.

Memory Metamaterials
T. Driscoll et al.
A tunable metamaterial is demonstrated that can remember its switched state.

Gold Helix Photonic Metamaterial as Broadband Circular Polarizer
J. K. Gansel et al.
A three-dimensional array of gold nano-helices can polarize light over a wide range of wavelengths.

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The kinase complex mTORC1 links nutrient availability to autophagy.

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