

1816 & 1850
 Possible new high for superconductivity critical temperatures

NEWS & COMMENT

- CERN: Alone on the Frontier** 1808
 A Leader by Consensus
- Hubble Telescope: Repairs Rekindle 3-Year-Old Dreams** 1810
- DOE Lifts the Veil of Secrecy From Laser Fusion** 1811
 An 'Openness Initiative'
- Research Ethics: Scandal Scars Minnesota Medical School** 1812

RESEARCH NEWS

- A Big Step for Superconductivity?** 1816
- New Bind for Ulcer Bacterium** 1817
- 'Bubble Boy' Paradox Resolved** 1818
- Ancient Climate Coolings Are on Thin Ice** 1818
- Is the Future Here for Gallium Arsenide?** 1819
- AIDS Vaccine Research: A New Goal: Preventing Disease, Not Infection** 1820

PERSPECTIVES

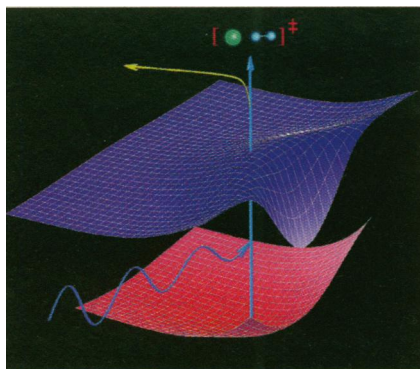
- Transition States of Chemical Reactions** 1828
 G. C. Schatz
- Two Jobs for the Origin Replication Complex** 1830
 C. S. Newlon

ARTICLE

- Distributions of Phytoplankton Blooms in the Southern Ocean** 1832
 C. W. Sullivan, K. R. Arrigo, C. R. McClain, J. C. Comiso, J. Firestone

RESEARCH ARTICLES

- Origin Recognition Complex (ORC) in Transcriptional Silencing and DNA Replication in *S. cerevisiae*** 1838
 M. Foss, F. J. McNally, P. Laurenson, J. Rine
- Yeast Origin Recognition Complex Functions in Transcription Silencing and DNA Replication** 1844
 S. P. Bell, R. Kobayashi, B. Stillman



1828 & 1852

Making a quick transition

DEPARTMENTS

- THIS WEEK IN SCIENCE** 1797
- EDITORIAL** 1799
 The Lessons of the Super Collider
- LETTERS** 1801
 Success in Science: W. E. Frick • Nationality of Engineering Students: D. N. Frey • M.D.-Ph.D. Degrees: D. L. Gottheil, T. G. Waldrop; A. DePalma • Conflict of Interest: D. F. Klein; D. E. Koshland Jr. • NIH: Intramural and Extramural Programs: C. Kupfer • Japanese Superconducting Computer: T. Sakamoto • Saving Old-Growth Forests: D. A. Perry
- SCIENCESCOPE** 1807
- RANDOM SAMPLES** 1814
 New Start for Behavioral Researchers • Study Sections Not Kosher?, etc.
- BOOK REVIEWS** 1906
In the Name of Science; *Targeted*; *The Hijacking of the Humane Movement*; *Monkey Business*, reviewed by H. Herzog • *Beyond the Wall*, K. Macrakis • *Symmetry in Chaos*, J. D. Crawford • *Thermodynamics in Geochemistry*, J. Walther • Vignettes • Books Received
- PRODUCTS & MATERIALS** 1914

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Model of the protein lysin superimposed on the shells of a red abalone. To fertilize the egg, the abalone spermatozoon must disrupt the protective vitelline envelope. Lysin binds to the filamentous glycoproteins that form the envelope and creates a hole by means of

a nonenzymatic process. The lysin-glycoprotein association also contributes to the species recognition between sperm and egg. See page 1864. [Cover design: Peggy Myer. Digital photography: Bob Turner. Molecular model: Mike Pique]



REPORTS

Evidence Suggesting Superconductivity at 250 K in a Sequentially Deposited Cuprate Film ■ 1850

M. Laguès, X. M. Xie, H. Tebbji, X. Z. Xu, V. Mairret, C. Hatterer, C. F. Beuran, C. Deville-Cavellin

The Transition State of the F + H₂ Reaction ■ 1852

D. E. Manolopoulos, K. Stark, H.-J. Werner, D. W. Arnold, S. E. Bradforth, D. M. Neumark

Nitrogen-15 and Oxygen-18 Characteristics of Nitrous Oxide: A Global Perspective 1855

K.-R. Kim and H. Craig

Superheating Effects on Metal-Silicate Partitioning of Siderophile Elements 1858

D. Walker, L. Norby, J. H. Jones

Orphan Strontium-87 in Abyssal Peridotites: Daddy Was a Granite 1861

J. E. Snow, S. R. Hart, H. J. B. Dick

The Crystal Structure of Lysin, a Fertilization Protein 1864

A. Shaw, D. E. McRee, V. D. Vacquier, C. D. Stout

A Functional Recombinant Myosin II Lacking a Regulatory Light Chain-Binding Site 1867

T. Q. P. Uyeda and J. A. Spudich

Isolation of ORC6, a Component of the Yeast Origin Recognition Complex by a One-Hybrid System ■ 1870

J. J. Li and I. Herskowitz

Sharing of the Interleukin-2 (IL-2) Receptor γ Chain Between Receptors for IL-2 and IL-4 ■ 1874

M. Kondo, T. Takeshita, N. Ishii, M. Nakamura, S. Watanabe, K.-i. Arai, K. Sugamura

Interleukin-2 Receptor γ Chain: A Functional Component of the Interleukin-7 Receptor ■ 1877

M. Noguchi, Y. Nakamura, S. M. Russell, S. F. Ziegler, M. Tsang, X. Cao, W. J. Leonard

Interleukin-2 Receptor γ Chain: A Functional Component of the Interleukin-4 Receptor ■ 1880

S. M. Russell, A. D. Keegan, N. Harada, Y. Nakamura, M. Noguchi, P. Leland, M. C. Friedmann, A. Miyajima, R. K. Puri, W. E. Paul, W. J. Leonard

Active Oxygen Species in the Induction of Plant Systemic Acquired Resistance by Salicylic Acid 1883

Z. Chen, H. Silva, D. F. Klessig

Functional Requirement of a Site-Specific Ribose Methylation in Ribosomal RNA 1886

K. Sirum-Connolly and T. L. Mason

Inhibition of Transcriptional Regulator Yin-Yang-1 by Association with c-Myc 1889

A. Shrivastava, S. Saleque, G. V. Kalpana, S. Artandi, S. P. Goff, K. Calame

Attachment of *Helicobacter pylori* to Human Gastric Epithelium Mediated by Blood Group Antigens ■ 1892

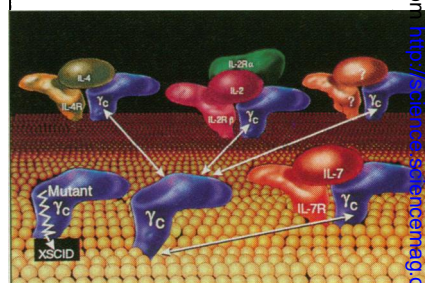
T. Borén, P. Falk, K. A. Roth, G. Larson, S. Normark

Separate GTP Binding and GTPase Activating Domains of a G α Subunit 1895

D. W. Markby, R. Onrust, H. R. Bourne

Linearity of Summation of Synaptic Potentials Underlying Direction Selectivity in Simple Cells of the Cat Visual Cortex 1901

B. Jagadeesh, H. S. Wheat, D. Ferster



1818, 1874, 1877 & 1880

Common subunit for interleukin receptors

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Science

262 (5141)

Science **262** (5141), 1797-1914.

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