Beyond Climate Science
Eric J. Barron

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From Science’s Online Daily News Site

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Clean Air, Heat the Planet?
A. Arneth et al.
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D. Acemoglu and J. Robinson
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10-GHz Self-Referenced Optical Frequency Comb
A. Bartels et al.
A laser that emits lines every 10 gigahertz can be used for frequency calibration in spectroscopy.

COVER
Crystal structures of the 70S ribosome from the bacterium Thermus thermophilus in complex with translation elongation factors Tu (EF-Tu) and G (EF-G). During protein synthesis, EF-Tu (in periwinkle blue, center) delivers an aminoacyl transfer RNA (green) to the ribosome for each amino acid indicated by the messenger RNA. As the polypeptide chain grows, EF-G (in green at top right) helps move the mRNA and tRNAs through the ribosome. See pages 688 and 694.

Images: Larissa Ulisko, Rebecca Voorhees, Martin Schmeing
RESEARCH ARTICLES

682  Intergenerational Wealth Transmission and the Dynamics of Inequality in Small-Scale Societies
M. Borgerhoff Mulder et al.
Some types of wealth are strongly inherited and, hence, contribute to long-term economic inequality.

688  The Crystal Structure of the Ribosome Bound to EF-Tu and Aminoacyl-tRNA
T. M. Schmeing et al.

694  The Structure of the Ribosome with Elongation Factor G Trapped in the Posttranslocational State
Y.-G. Gao et al.
Crystal structures of the ribosome bound to elongation factors provide insights into translocation and decoding.

REPORTS

699  High-Temperature Superconductivity in a Single Copper-Oxygen Plane
G. Logvenov et al.
Interfaces of oxide metals and insulators confine a superconducting state to one copper oxide plane.

702  Reconstruction of Molecular Orbital Densities from Photoemission Data
P. Puschnig et al.
Maps of photoelectron momentum can reveal the orbital geometries of aromatic molecules adsorbed on surfaces.

706  Synergic Sedation of Sensitive Anions: Alkali-Mediated Zincation of Cyclic Ethers and Ethene
A. R. Kennedy et al.
Tandem coordination by zinc and an alkali metal increases the reactivity of carbon-hydrogen bonds of organic molecules.

708  4D Nanoscale Diffraction Observed by Convergent-Beam Ultrafast Electron Microscopy
A. Yurtsever and A. H. Zewail
Focusing an ultrashort electron pulse enables dynamic structural probing of materials that have nanoscale heterogeneity.
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Patricia Alireza already had grandchildren when her physics career began to bloom.