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ON THE WEB THIS WEEK
>> Science Podcast
Listen to stories on 100 years of crystallography, firming up the link between climate change and malaria, and more.
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COVER
Precission image reconstructed from x-ray diffraction data collected from a benzene single crystal. For the past 100 years, x-ray crystallography has been a key tool for determining the structures of ever more complex chemical and biochemical systems. See the special section beginning on page 1091 and at www.sciencemag.org/special/crystallography.
Image: Judith A. K. Howard and Michael R. Probert
RESEARCH ARTICLES

1117 Dynamic Reorganization of River Basins
S. D. Willett et al.
A proxy for river elevation demonstrates the degree to which river networks reorganize and equilibrate.
Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1248765

1118 Innate Immune Activity Conditions the Effect of Regulatory Variants upon Monocyte Gene Expression
B. P. Fairfax et al.
Analysis of the transcriptional responses during induced innate immune activity in primary human monocytes is explained.
Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1246949

1119 Common Genetic Variants Modulate Pathogen-Sensing Responses in Human Dendritic Cells
M. N. Lee et al.
Mapping of human host-pathogen gene-by-environment interactions indentifies pathogen-specific loci.
Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1246980

1120 Quantifying Molecular Stiffness and Interaction with Lateral Force Microscopy
A. J. Weymouth et al.
Lateral force microscopy reveals the torsional spring constant of a carbon nanotube molecule at the end of an atomic force microscope tip.
Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1246981

1122 Simultaneous Ground- and Space-Based Observations of the Plasmaspheric Plume and Reconnection
B. M. Walsh et al.
Ground-based and satellite observations show that a plume extends all the way to the magnetopause and can persist for hours.
Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1246982

1125 Tunable Phonon Polaritons in Atomically Thin van der Waals Crystals of Boron Nitride
S. Dai et al.
Infrared nanoimaging is used to detect a type of surface collective mode in a representative van der Waals crystal.
Research Article Summary; for full text: http://dx.doi.org/10.1126/science.1246983

REPORTS

1129 Rapid Reductions in North Atlantic Deep Water During the Peak of the Last Interglacial Period
E. V. Galassen et al.
Deep ocean circulation was less stable during the last interglacial periods than previously supposed.

1133 Structural Basis for Heavy Metal Detoxification by an Atm1-Type ABC Exporter
J. Y. Lee et al.
Structural and functional studies of ABC exporters provide insight into how glutathione derivatives are translocated.
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1137 Crystal Structures of Nucleotide-Free and Glutathione-Bound Mitochondrial ABC Transporter Atm1
V. Srinivasan et al.
Crystallography and spectroscopy detail a key mechanistic step in the microbial biosynthesis of an important antibiotic class.
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1140 Mechanism of the C5 Stereoinversion Reaction in the Biosynthesis of Carbapenem Antibiotics
W.-C. Chang et al.
Crystallography and spectroscopy detail a key mechanistic step in the microbial biosynthesis of an important antibiotic class.
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1145 Mapping the Epigenetic Basis of Complex Traits
S. Cortijo et al.
Genetic mapping reveals epigenetic changes associated with flowering time and root length.
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1148 A Single Gene Affects Both Ecological Divergence and Mate Choice in Drosophila
H. Chung et al.
A methyl-branched cuticular hydrocarbon affects both desiccation resistance and mate choice in related Drosophila species.

1154 Altitudinal Changes in Malaria Incidence in Highlands of Ethiopia and Colombia
A. S. Siraj et al.
Warmer years promote malaria cases at higher altitudes.
>> Science Podcast