Human intestinal bacteria (field-of-view width: ~11.4 µm). The human gut is teeming with symbiotic microbes that interact with their host to maintain health. A joint Science and Science Translational Medicine special section (see page 1245) explores advances in microbial ecology, microbial and host metabolisms, and interactions between gut microbes and the host immune system. Complementary articles discuss how to apply this knowledge to boost health and nutrition, combat infectious disease, and control noncommunicable diseases such as obesity and diabetes.

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P. Plevka et al.
The structure of a virus linked to neurological disease reveals how drugs targeting viruses in this family can be modified.

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1275 The Stomatopod Dactyl Club: A Formidable Damage-Tolerant Biological Hammer
J. C. Weaver et al.
The structure of mantis clubs is optimized to prevent complete failure caused by repetitive impacts.
>> Perspective p. 1237; Science Podcast

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1280 Quantum Information Storage for over 180 s Using Donor Spins in a 28Si “Semiconductor Vacuum”
M. Steger et al.
An almost isotopically pure sample of 28Si provides a vacuumlike environment for 31P qubits.
1283 Room-Temperature Quantum Bit Memory Exceeding One Second
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Defects in diamond can be operated as quantum memories at room temperature.
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1287 Bright Coherent Ultrahigh Harmonics in the keV X-ray Regime from Mid-Infrared Femtosecond Lasers
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An electron excitation process in a high-pressure gas converts infrared light into a well-confined beam of x-rays.
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1298 Titanium and Zinc Oxide Nanoparticles Are Proton-Coupled Electron Transfer Agents
J. N. Schrauben et al.
Protons can play more of a role than previously appreciated in charge-transfer events at nanoparticle interfaces.

1301 Interglacial Hydroclimate in the Tropical West Pacific Through the Late Pleistocene
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1306 Vitamin K2 Is a Mitochondrial Electron Carrier That Rescues Pink1 Deficiency
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Adding vitamin K rescues fruit flies bearing a mutation in a Parkinson’s disease gene homolog.
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1312 Interactions Between Commensal Fungi and the C-Type Lectin Receptor Dectin-1 Influence Colitis
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1325 Regulated Virulence Controls the Ability of a Pathogen to Compete with the Gut Microbiota
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Sequencing of cell-free fetal-derived DNA from maternal plasma provides a noninvasive way to predict the fetal genome sequence.

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