False-colored scanning electron micrograph of the bacterial pathogen Streptococcus pneumoniae (typical length, ~1 micrometer), a major cause of pneumonia and meningitis. On page 430, Croucher et al. describe the use of whole-genome sequencing to track the global spread of a rapidly recombining S. pneumoniae lineage as it adapts to antibiotic use and vaccine introduction.

*Image: Dennis Kunkel Microscopy, Inc./Visuals Unlimited, Inc.*
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426 The Newest Synthesis: Understanding the Interplay of Evolutionary and Ecological Dynamics
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Streptococcus pneumoniae evades vaccines and drugs by high levels of recombination and rapid adaptation.
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435 The Genetic Landscape of the Childhood Cancer Medulloblastoma
D. W. Parsons et al.
Genomic analysis of a childhood cancer reveals markedly fewer mutations than what is typically seen in adult cancers.

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R. Okazaki et al.
The mysterious hidden-order phase of a heavy-fermion compound may be an electronic nematic state.

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A. Dogariu et al.
Focused ultraviolet light creates a distant "lasing spark" in air that can then be used for remote detection.

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A photosresponsive ligand is used to reversibly modulate the magnetic properties of a nickel compound.

448 Kinetic Isotope Effects for the Reactions of Muonic Helium and Muonium with H2
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Calculated reaction rates for two hydrogen isotopes, one 36 times heavier than the other, agree with experiments at 500 kelvin.
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453 The Southern Route "Out of Africa": Evidence for an Early Expansion of Modern Humans into Arabia
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