A hexabenzocoronene molecule (diameter: 1.4 nanometers) imaged by noncontact atomic force microscopy using a microscope tip terminated with a single carbon monoxide molecule. The carbon-carbon bonds in the imaged molecule appear with different contrast and apparent lengths. Based on these disparities, the bond orders and lengths of the individual bonds can be distinguished. See page 1326.

Image: Leo Gross, IBM Research - Zurich
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Laser-based photoemission spectroscopy is used to map out the pairing gap of an iron-based superconductor.

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Two halves of a split ultracold gas of rubidium atoms retain memory of the initial state for an extended time.

1322  Oxidative Aliphatic C-H Fluorination with Fluoride Ion Catalyzed by a Manganese Porphyrin
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A catalyst introduces fluorine in a convenient, mild fashion to a range of relatively inert hydrocarbons.

1326  Bond-Order Discrimination by Atomic Force Microscopy
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Images detected with an atomic force microscope tip decorated with a carbon monoxide molecule could distinguish Pauling bond order.

1330  Glacier Extent During the Younger Dryas and 8.2-ka Event on Baffin Island, Arctic Canada
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A genetic locus containing three protein-coding genes underlies the system causing hybrid sterility among rice species.

1340  Single Reconstituted Neuronal SNARE Complexes Zipper in Three Distinct Stages
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1348  Structural Probing of a Protein Phosphatase 2A Network by Chemical Cross-Linking and Mass Spectrometry
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Must a Paper Trail Be Paper?
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RESEARCH ARTICLE: Anthrax Vaccine–Induced Antibodies Provide Cross-Species Prediction of Survival to Aerosol Challenge
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