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Diagonally opposed images of carbon monoxide (CO) bound to (upper left) and photodissociated from (lower right) the heme in myoglobin. The orientation of CO was determined with time-resolved polarized infrared spectroscopy. As illustrated schematically, a visible laser pulse (red) photodissociates the CO from the heme and an infrared pulse (gray), ariving $10^{-16}$ seconds later, probes the infrared spectrum of CO. See page 962 and the related News story on page 921. Illustration: M. Lim, T. Jackson, and P. Anfinrud

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