ON THE COVER: Color changes in the vials (at 30, 90, 330, and 930 s, back to front) of Cr(VI) oxidation reactions demonstrate a visually accessible kinetic isotope effect. Unlabeled 2-propanol in the center vial reacts with Cr(VI) to a blue endpoint, while the reaction of deuterated 2-propanol in the right vial only barely advances in the same time period. Both reactions are judged against the left vial, a control solution containing no alcohol. When students are shown this in-class demonstration or the companion video, they are able to see an isotope effect as evidence for a rate-determining C-H abstraction step in the oxidation process. See the article "Visual Isotope Effects: Demonstrating the Primary Kinetic Isotope Effect in the Chromium(VI) Oxidation of 2-Propanol-\(\text{d}_6\) and Methanol-\(\text{d}_5\)" (DOI: 10.1021/ed300628n) by Wendy S. Iskenderian-Epps, Chloe Solits, and Daniel J. O'Leary.

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