Acceptorless Alcohol Dehydrogenation with an Iron–Cobalt Double-Atom Catalyst

**Significance:** An Fe–Co double-atom catalyst supported on N-doped carbon (FeCo-DAC), prepared according to equation 1, catalyzed the dehydrogenation of alcohols to afford the corresponding aldehydes or ketones in ≤98% yield with generation of H₂ gas (eqs. 2 and 3).

**Comment:** FeCo-DAC was characterized by means of XRD, XPS, Raman, ICP-AES, TEM, HAADF-STEM, EDX, XANES, and EXAFS analyses. In the dehydrogenation of benzylic alcohol, the catalytic activity of FeCo-DAC was superior to that of the corresponding Fe and Co single-atom catalysts or other supported metal catalysts, such as Pd/C or Ru/C.