



FIG. 10.13 Transport critical-current density vs. applied field normalized to a characteristic magnetic field H_0 . The solid line depicts the result of a Josephson tunneling model for current transport across grain-boundary weak links, which fits the data well without adjustable parameters. The weak-link decoupling field H_0 used in the model is given by Eq. (10.13) and has a value of only about 1 mT in typical YBCO materials at temperatures of 77 K and below. (From Peterson and Ekin 1988.)