



FIG. 8.5 Contact resistivity of Ag/YBCO interfaces at 4 K as a function of exposure time to air, CO_2 , N_2 , O_2 , and vacuum (from Russek et al. 1994). The term “in-situ contacts,” designating the data to the left of the vertical dashed line, refers to noble-metal contact pads deposited in-situ on freshly fabricated superconductor surfaces not exposed to air. The “effective” exposure times for these in-situ contacts result from the small residual partial pressure of water vapor in the vacuum chamber, which reacts with the sample surface during the period between the end of superconductor deposition and the start of noble-metal deposition.