FIG. 1

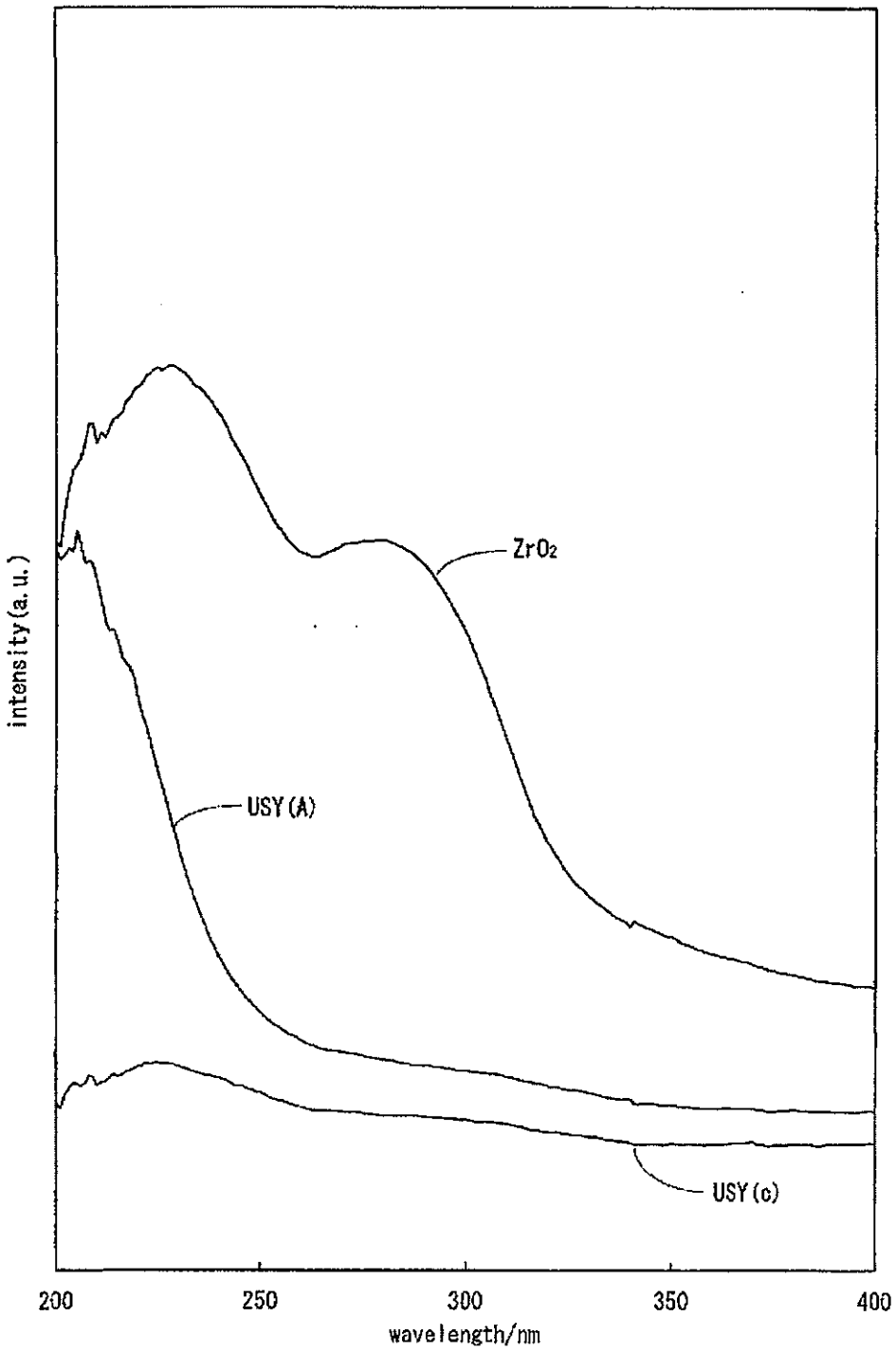

intensity(a.u.)
ZrO2
USY(A)
USY(c)
200
250
300
350
400
wavelength/nm

FIG. 2

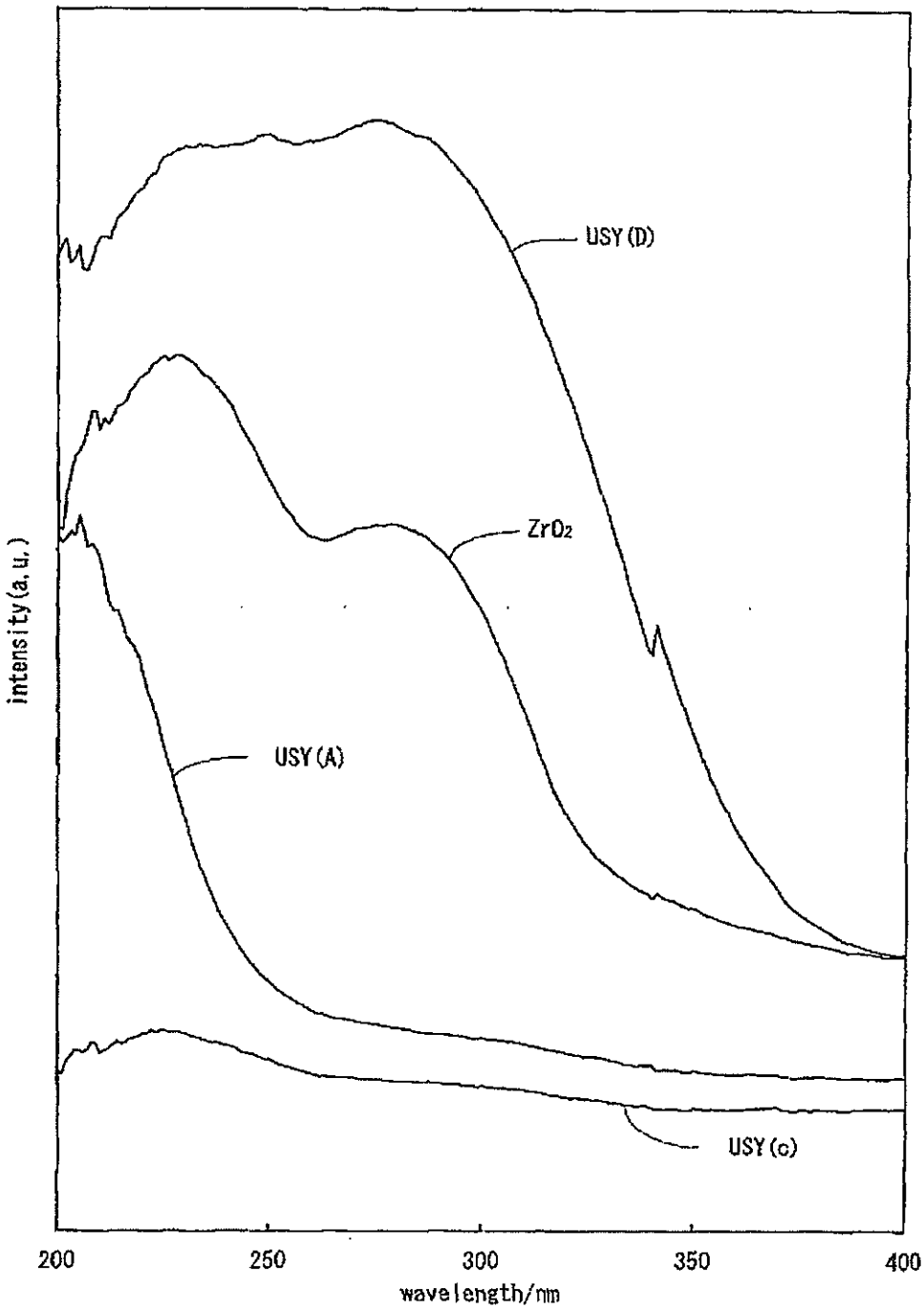

USY(D)
ZrO2
USY(A)
USY(c)
intensity(a.u.)
200
250
300
350
400
wavelength/nm

FIG. 3

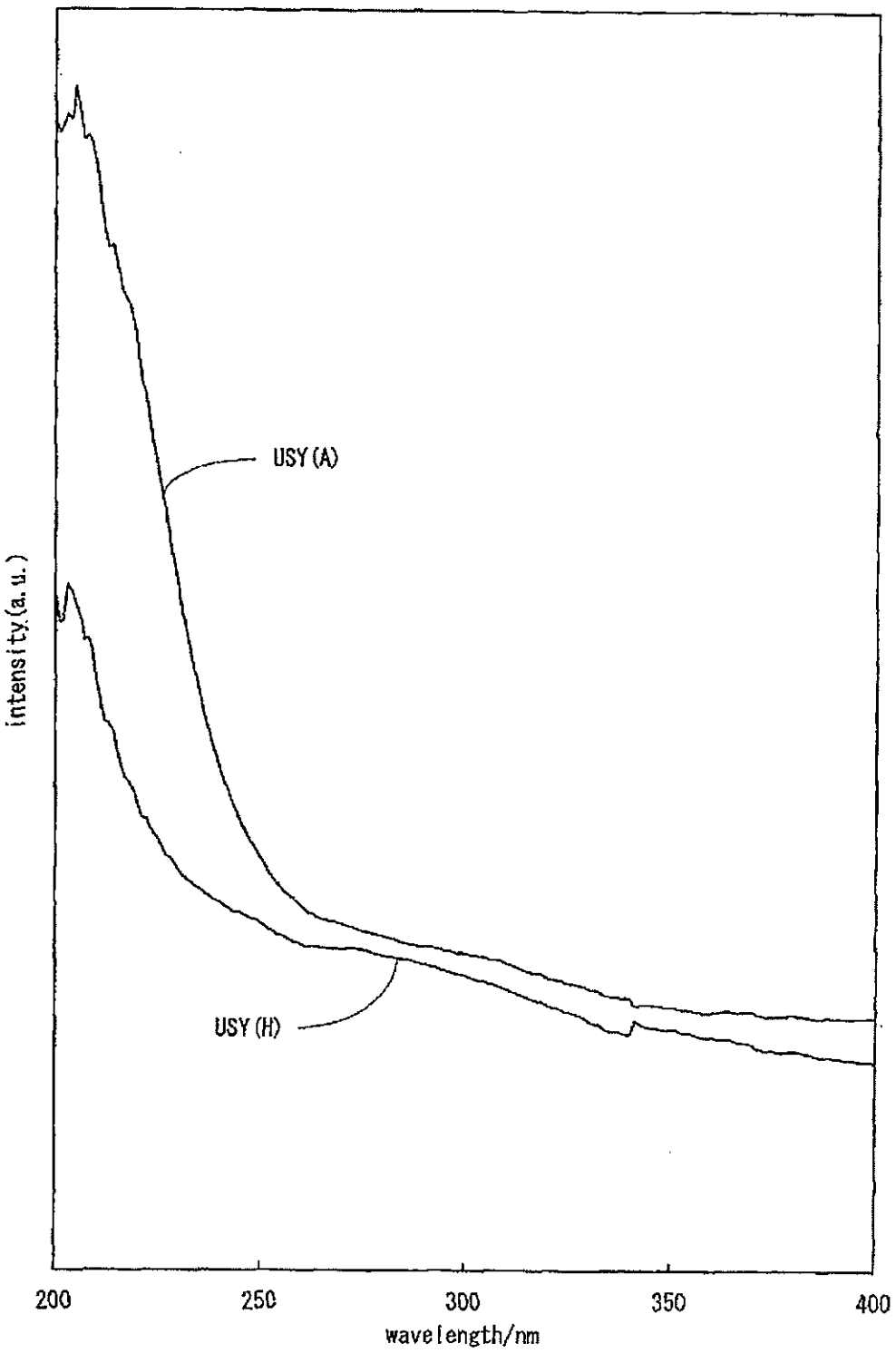
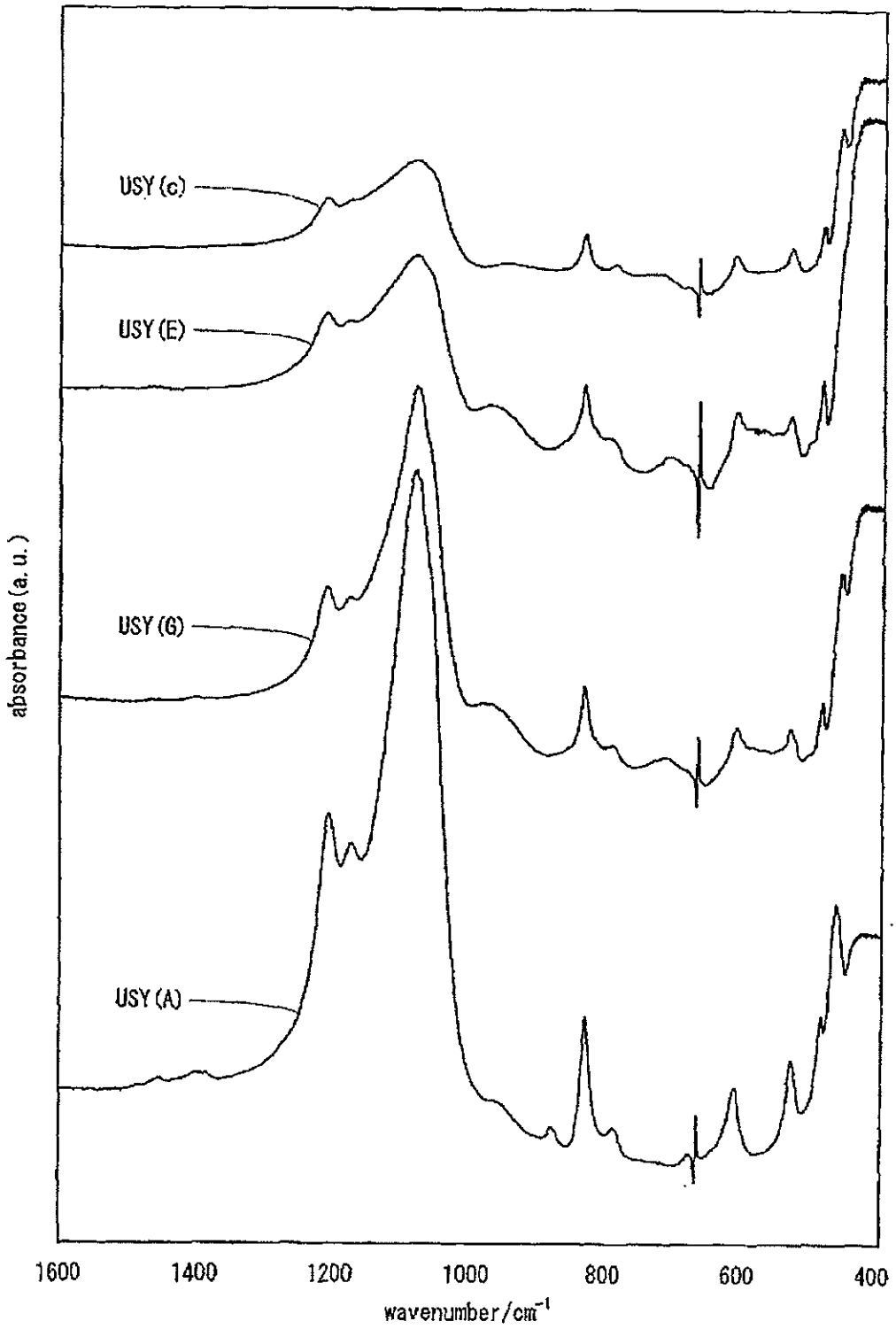


FIG. 4


USY (c)
USY (E)
USY (G)
USY (A)
absorbance (a. u.)
1600
1400
1200
1000
800
600
400
wavenumber/cm-1