

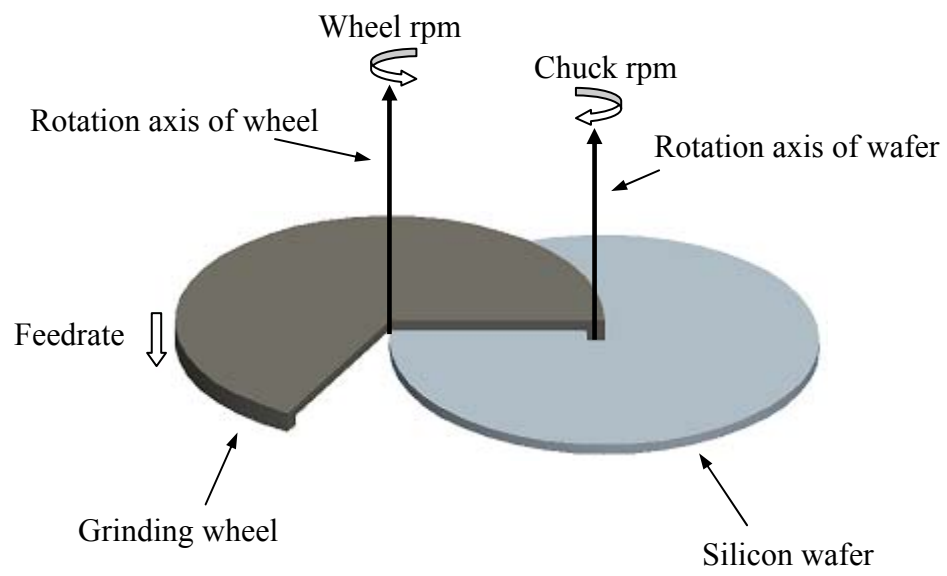
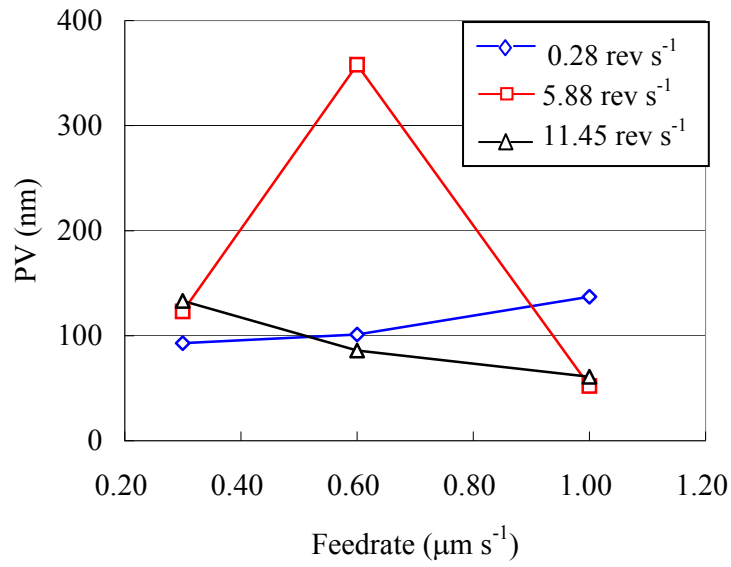
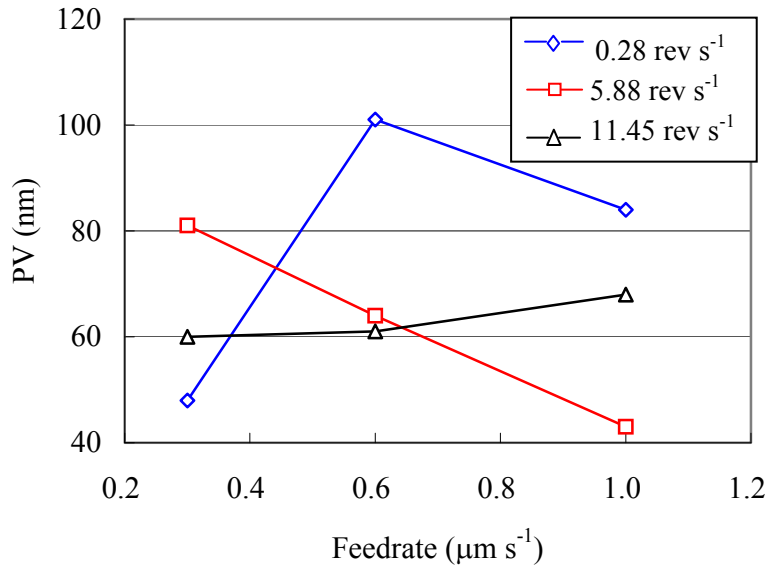


Fig. 1. Illustration of wafer grinding.



(a)



(b)

Fig. 2. Effects of feedrate and chuck speed on the PV values over the entire wafer surfaces. (a)

For wafers #1- #9, (b) for wafers #10- #18.

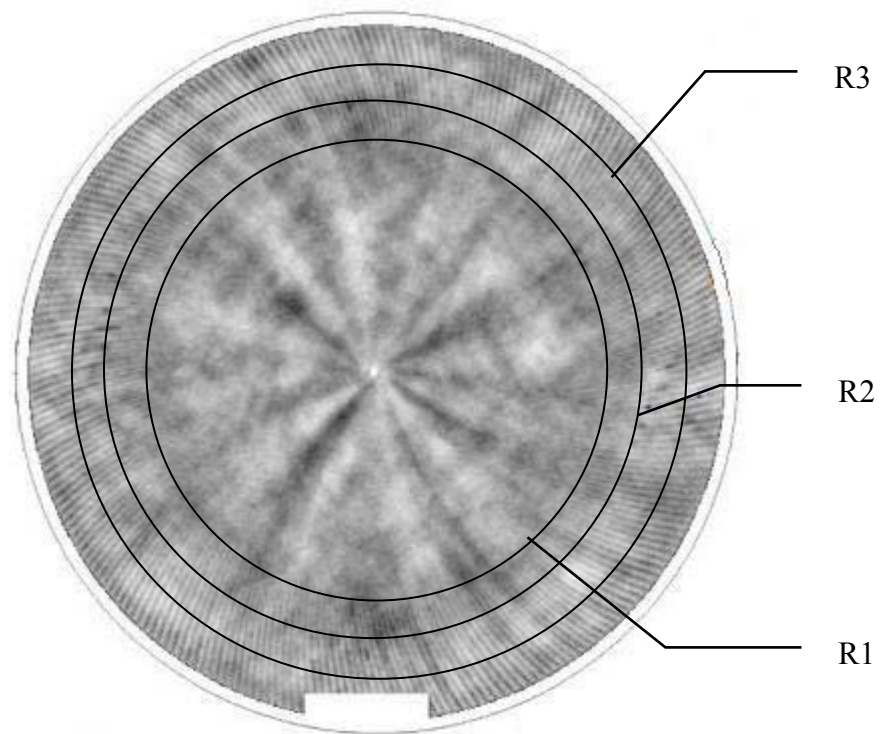
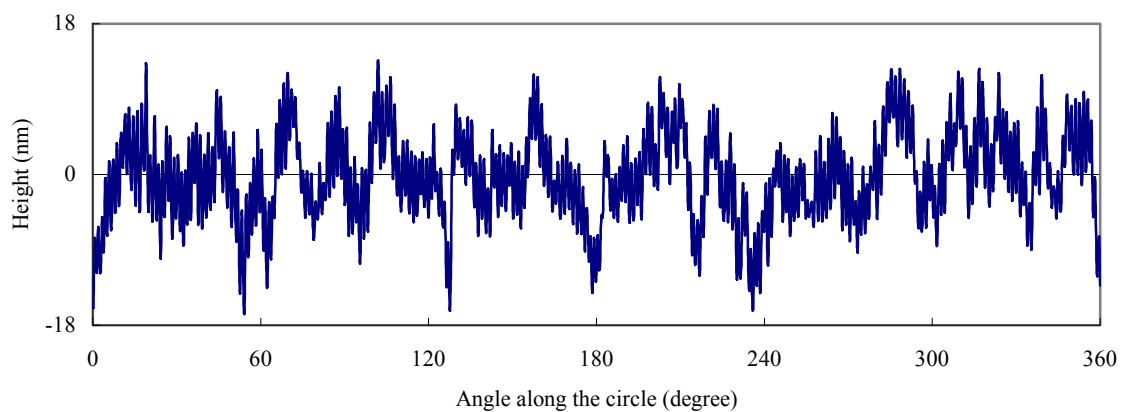
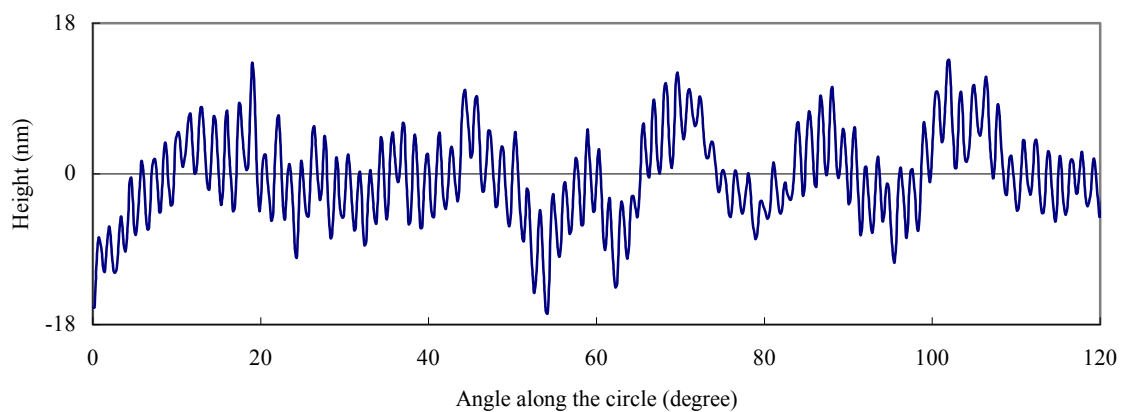


Fig. 3. Obtaining three circular profiles on the wafer surface along three circles
(The radius = 61.22 mm for R1, 72.79 mm for R2, and 83.22 mm for R3).

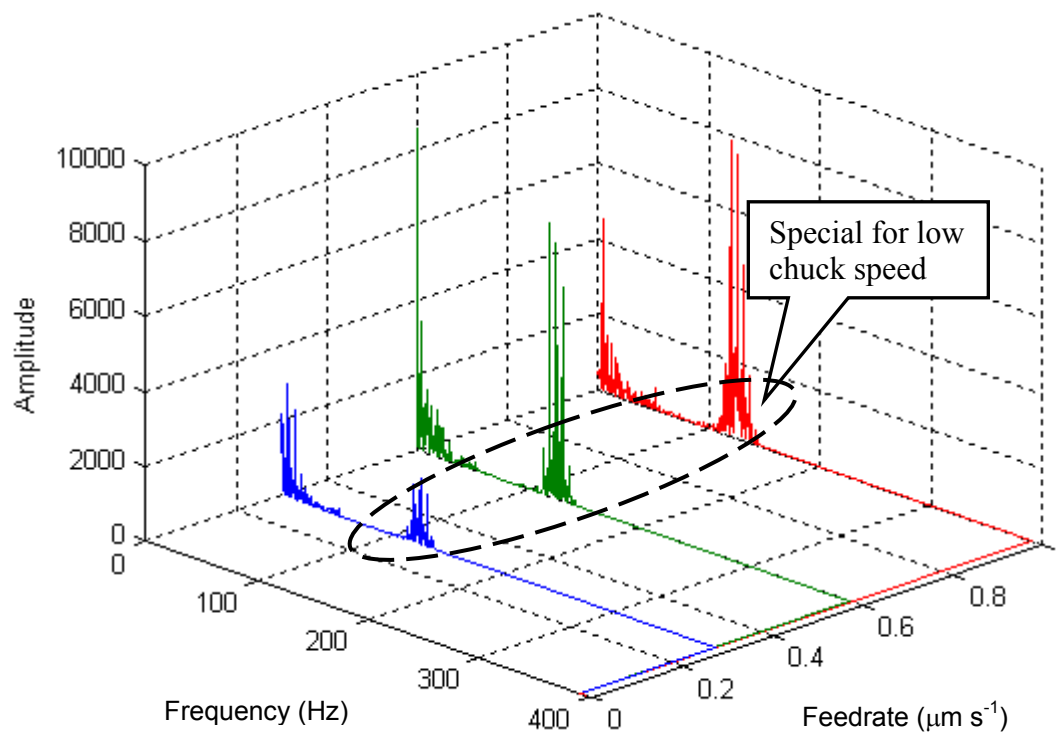


(a)

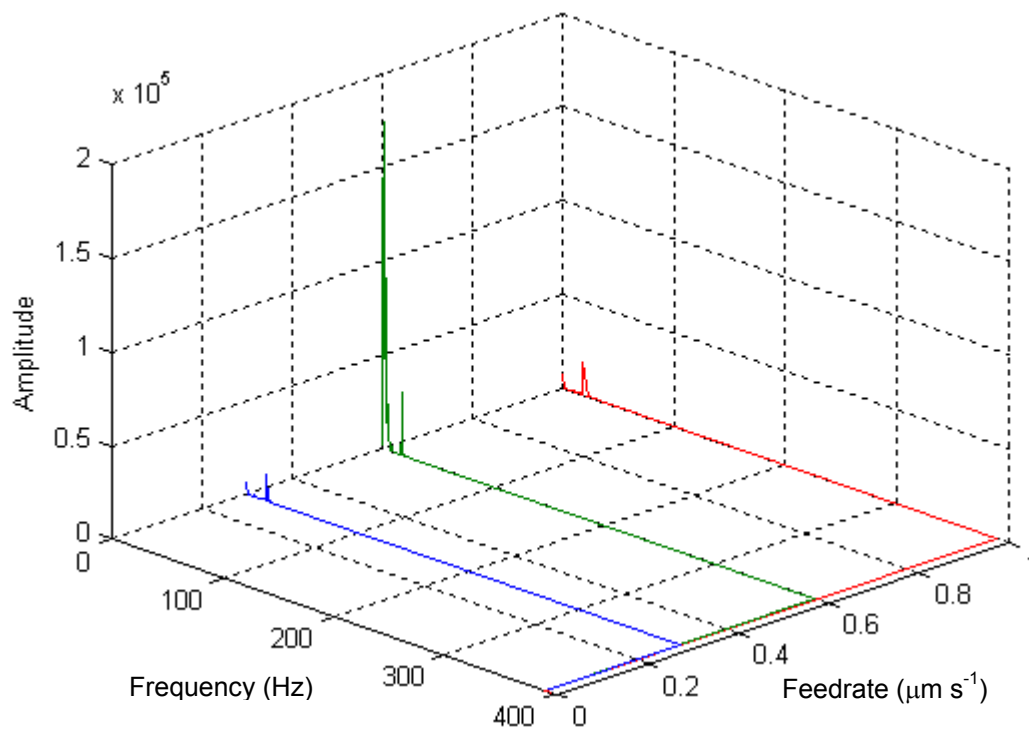


(b)

Fig. 4. Measured surface profile along the circle of R3 for Wafer #10. (a) Surface profile over the entire circle, (b) surface profile over one third of the entire circle.

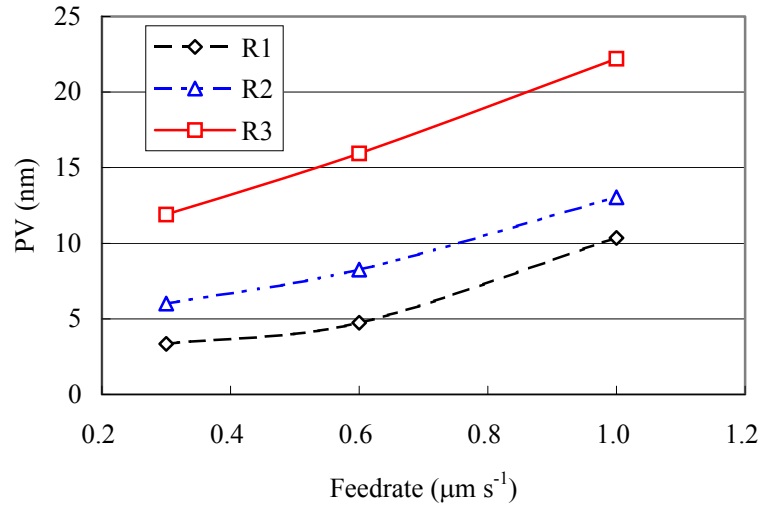


(a)

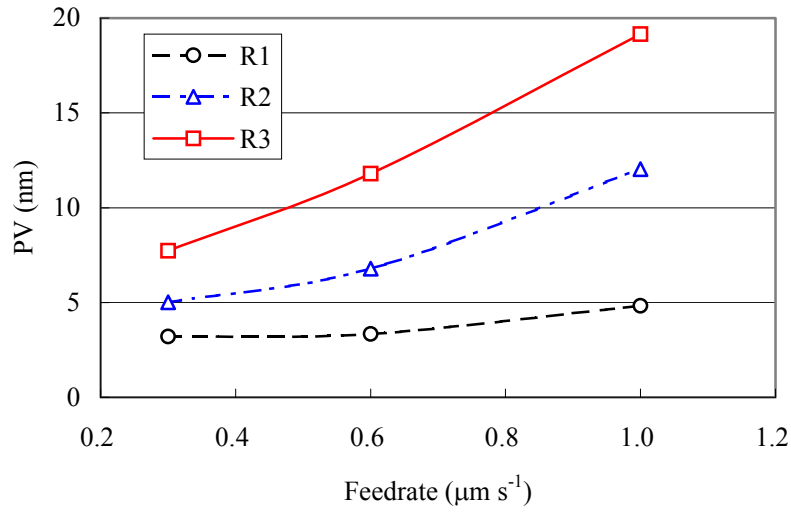


(b)

Fig. 5. FFT graphs for some test wafers. (a) For wafers #1-#3, chuck speed = 0.28 rev s^{-1} (17 rpm), (b) for wafers #4-#6, chuck speed = 5.88 rev s^{-1} (353 rpm).

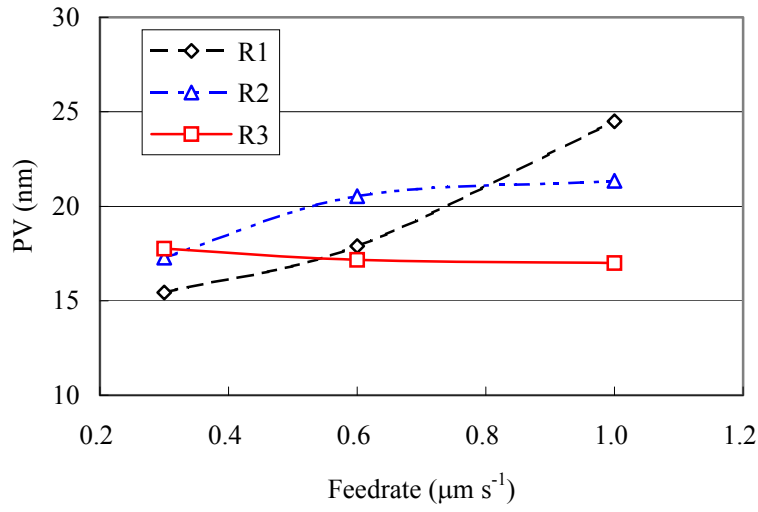


(a)

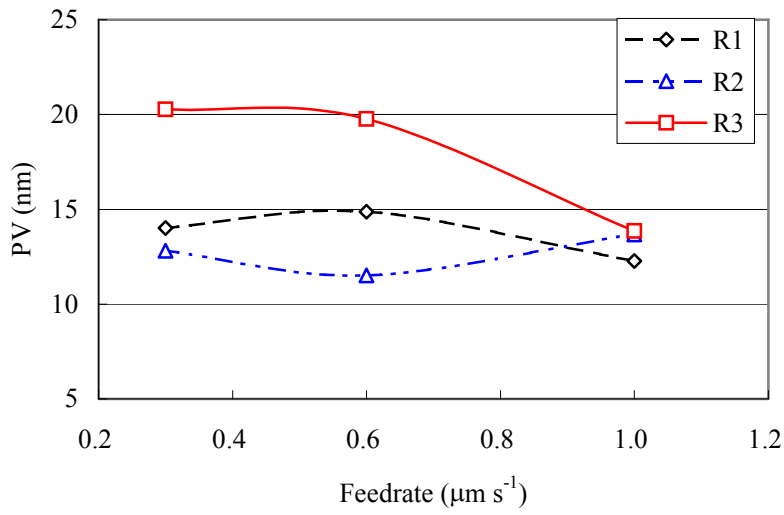


(b)

Fig. 6. Effects of feedrate on the PV values for the high-frequency surface feature component when chuck speed = 0.28 rev s^{-1} (17 rpm). (a) For wafers #1 - #3, (b) for wafers #10 - #12.



(a)



(b)

Fig. 7. Effects of feedrate on the PV values for the low-frequency surface feature component when chuck speed = 0.28 rev s^{-1} (17 rpm). (a) For wafers #1 - #3, (b) for wafers #10 - #12.