

Fig. 1

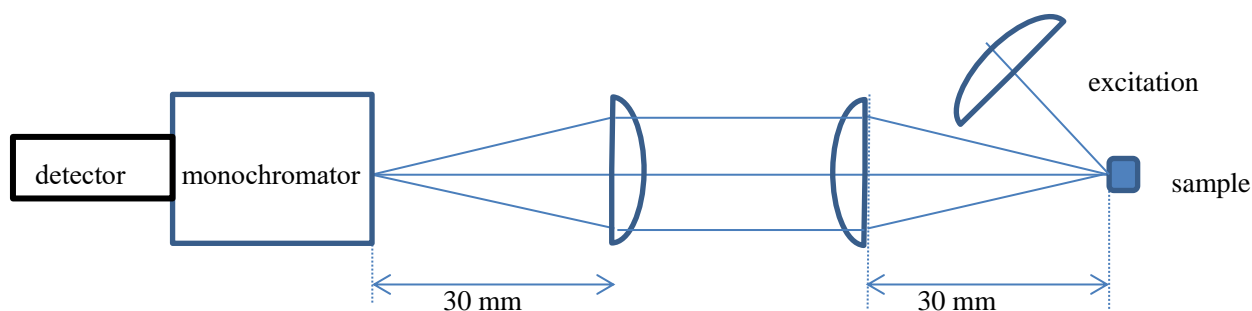


Fig. 2

Photoluminescence spectrum from a semiconductor with band gap energy of 3.56 eV is shown in Fig. 1. To observe Fig. 1, one set up observation system as shown in Fig. 2.

Details of observation systems are following.

Excitation source: He-Cd laser at 325 nm.

Conditions of Lenses are, focal length  $f = 30$  mm, effective diameter  $\phi = 30$  mm, material BK7.

Monochromator: Focal length 100 mm,  $F=3$ , blaze wavelength 700 nm, grating blaze 150 line/mm

- (1) Point out wrong point(s) or unsuitable point(s) with reason(s). (you must consider from sample to entrance of detector. It is not necessary to consider excitation system and detector). If you do not show reason, your score will be reduced.
- (2) Denote how to correct wrong point(s) and unsuitable point(s) mentioned above.

Caution

You must answer in text and you cannot answer with any figures (pictures)

You can get 10 points if you show each wrong point(s), unsuitable point(s), how to correct wrong point(s), and how to correct unsuitable point(s). If your score over 100 points, your points to be 100 points.

### **Advanced Topics on Spectroscopy 2020 report 3**

Deadline 2020/6/5 15:00(JST)

Submitting place: mail box at room 406 of the electrical engineering building.

Write your e-mail address which can receive from tanaka@vos.nagaokaut.ac.jp.

If your score is less than 60, I will inform you. If your written address rejected my mail, I will not inform you.

If you resubmit report, your final score of this report is 80% of resubmit report, however, if the final score is higher than 60, your final score of this report is 60. You can resubmit only one time.