

國立台灣科技大學X光繞射儀實驗室使用儀器設備申請表  
X-ray Diffractometer User Request Form

|                            |  |                   |  |                         |  |                                   |  |
|----------------------------|--|-------------------|--|-------------------------|--|-----------------------------------|--|
| 申請單位<br>Department         |  | 申請學生<br>Applicant |  | 分機<br>Extension<br>no.e |  | 教授簽章<br>Supervisor's<br>signature |  |
|                            |  |                   |  | 手機<br>cellphone         |  |                                   |  |
| 申用儀器<br>Equipment<br>Using | <input type="checkbox"/> D2 PHASER X光繞射儀(D2 PHASER X-ray Diffractometer)<br><input type="checkbox"/> D8 DISCOVER SSS 多功能高功率X光繞射儀(Multi Function High Power X-Ray Diffractometer)   |                   |  |                         |  |                                   |  |
| 儀器認證級別<br>Certification    | <input type="checkbox"/> : 取得認證、相關課程學分者並上過輻射安全講習可自行操作<br>Yes, I have qualified the certification of operating this equipment and attended radiation safety course.<br><input type="checkbox"/> : 未經取得認證須有符合自行操作人員陪同操作<br>No, I have not yet qualified the certification of operating this equipment. I will use it with qualified. |                   |  |                         |  |                                   |  |
| 使用時間<br>Time               | 年 月 日 時至 時<br>yy mm dd o'clock to o'clock<br>預約時間(小時)Reserved time(Hours):   |                   |  |                         |  |                                   |  |

**說 明：**

一、本實驗室各項儀器設備包含有高電壓、高真空抽氣系統、冷卻循環系統等，並且會產生X光輻射，進入本實驗室務須嚴守相關安全事項。

The instruments in this laboratory contain high voltage and high vacuum systems, circulation cooling system.....etc, and will generate X-rays. Please strictly follow the safety regulations of this laboratory.

二、本項儀器使用者採證照制度，具有合格使用資格者方能自行操作儀器設備。擅自操作導致機台毀損，需自付維修費。

Certificate is required for using this equipment. Only the person who passed the certification of operation can use this equipment on his/her own. If violating the lab rules and causing damages, you will be asked to pay the maintenance fee.

三、儀器使用時間合格操作人員必須全程在場，並攜帶身份證明文件備查，若否實驗室將停權一個月。

Qualified user should present throughout the using period and prepare personal ID for check. If not, the laboratory will be suspended for a month.

四、試片載台必須保持清潔，以防止汙染

Sample stage must be clean at all times to prevent pollution.

五、取樣應注意事項 sample preparation note:

1. 尺寸:D2 XRD最大直徑 $\Phi$ 3.5cm，最大高度0.4cm；D8 XRD最大高度0.6cm。

Max.size for D2 XRD is  $\Phi$ 3.5cm and Highness is 0.4cm; For D8 XRD is Highness is 0.6cm.

2. 試片必須保持乾燥及乾淨。

Sample needs to be dry and clean.

3. 粉末或水泥等樣品應確實固定於試片載台上，避免鬆動掉落。

Powder or soil must be fixed well in holder, prevent them from loosing.

六、如果有實驗需求特殊操作時段，請於申請時註明。

If there are special time requirements, please note on the request form.

七、收費標準如下fee list：（學生使用費記於其指導教授名下）

| <b>對象</b><br><b>User identity</b>                         | <b>D2 XRD</b>            | <b>D8 XRD</b> | <b>開放時段</b><br><b>Opening hours</b> | <b>備註</b><br><b>Remarks</b>         |
|---|--------------------------|---------------|-------------------------------------|-------------------------------------|
| <b>校內</b><br><b>Intramural</b>                            | \$150/Hr                 | \$200/Hr      | Weekdays                            | Operated by the users his / her own |
| <b>校內委託</b><br><b>Intramural (operator)</b>               | \$300/Hr                 | \$400/Hr      | Weekdays (office hours)             | Operated by the qualified operators |
| <b>校外學術</b><br><b>Extramural (Academic Unit)</b>          | \$600/Hr                 | \$2,000/Hr    | Weekdays (office hours)             | Operated by the qualified operators |
| <b>校外產業</b><br><b>Extramural (Industry)</b>               | \$2,000/Hr               | \$4,000/Hr    | Weekdays (office hours)             | Operated by the qualified operators |
| <b>科技部貴儀</b><br><b>Ministry of Science and Technology</b> | (不開放)<br>(Not permitted) | \$9,000/3Hrs  | Weekdays (office hours)             | Operated by the qualified operators |

附件：

## 台科大 X 光繞射儀操作資格考試細則

### Regulations of X-ray Diffractometer Qualification of NTUST

1. X光繞射儀操作資格考之內容包含：

X-ray diffractometer qualification test includes.

(1) 已上過環安室每年所辦之幅射防護安全講習並取得結業證明者，可申請資格考。

Students passed the radiation safety course and received course certificate from Environmental Safty office.

(2) 儀器之相關專業知識、作業安全與儀器操作，考試方式包含筆試與實作。

The test includes a written test and an operating test, and will be based on professional knowledge, lab safety, and equipment operation.

2. 本校在學學生已取得下列任一門研究所或大學部課程學分者，可以取代操作資格考之筆試部分。

Students whom passed one of the following courses doesn't have to take the written test.

(1) X 光繞射與結晶學

X-ray Diffraction and Crystallography

(2) 高分子 X 光繞射

X-ray Diffraction in Polymeric Materials

(3) 結晶與繞射導論

Introduction to X-ray Crystallography and Diffraction

(4) 材料實驗方法

Experimental Methods of Materials

(5) 材料物化性分析

Physical and Chemical Analysis on Materials

(6) 高等材料表面分析

Advanced Surface Characterizations for Materials