Laser Safety

1. The word “laser” is the acronym for **L**ight **A**mplification by **S**timulated **E**mission of **R**adiation.

2. A laser is an intense, highly coherent, directional and monochromatic beam of light, either visible or invisible.

3. Lasers are usually labeled with a safety class number, which identifies how dangerous the laser is:
   a. Class 1 lasers are inherently safe, usually because the light is contained in an enclosure, for example in CD/DVD players and laser printers.
   b. Class 2 lasers are safe during normal use; the blink reflex of the eye will prevent damage. Usually up to 1 mW power, e.g. bar code scanners.
   c. Class 3R lasers are usually up to 5 mW and involve a small risk of eye damage within the time of the blink reflex. Staring into such a beam for several seconds is likely to cause damage to a spot on the retina. Some laser pointers are of this class.
   d. Class 3B lasers can cause immediate eye damage upon exposure.
   e. Class 4 lasers can burn skin and start fires, and in some cases, even scattered light can cause eye and/or skin damage. Many industrial and scientific lasers are in this class.

4. Never stare directly into a beam even with eye protection; use indirect viewing. Do not direct a laser beam at any aircraft, vehicle, reflective surface or person.

5. Do not attempt to remove the enclosures of laser products, e.g. CD/DVD players, laser printers, laser cutters and bar code scanners.

6. Properly use and maintain the laser equipment according to manufacturer specifications. Report any defects and irregularities to your supervisor.

7. Observe all written procedures, safety rules, warning signs and properly use appropriate personal protective equipment if required. Never enter a “Laser Controlled Area” without authorization.

8. Please consult the Departmental Laser Protection Officer on the use and purchase of Class 3B and Class 4 lasers or essential laser components.

9. Only authorized staff and students who have received recognized laser safety training can operate Class 3B and Class 4 unenclosed lasers.

10. All staff, MPhil and PhD students who regularly operate Class 3B or Class 4 unenclosed lasers are eligible for eyesight tests sponsored by the University. Policy on Eyesight Testing for Users of Class 3B and 4 Lasers

11. If an emergency arises, notify other people in the area and call the 24-hour Security Hotline at 3442 8888 or call 999.

激光安全

1. Laser 是英文 **L**ight **A**mplification by **S**timulated **E**mission of **R**adiation 的首字母縮合詞，是指藉受激輻射而產生或放大的光波。

2. 激光是屬於強烈、高凝聚性、單方向及單色、包括肉眼可見及不可見的光束。

3. 激光產品須附有規定的標記，並列明該激光產品的分類：
   a. 1 類激光產品本質上是安全的，因為光束在被包封下使用，例如鐳射碟播放機及鐳射打印機。
   b. 2 類激光產品在一般情況下使用是安全的；通常由眼睛對光的迴避反應（包括眨眼）提供對眼睛的保護。輸出功率不超愈 1 毫瓦，例子是條碼解讀器。
   c. 3R 類激光產品的輸出功率可達 5 毫瓦。直視光束會有危險，如直視數秒後會損害視網膜。例子有鐳射筆（或稱激光指示器）。
   d. 3B 類激光產品發出的光束是有危害的。近距離直視光束會對眼睛造成即時傷害。
   e. 4 類激光產品為高功率激光器，能灼傷皮膚，並可造成火災；在一些情況下，甚至其散射光亦可對眼睛及皮膚造成傷害。很多工業及科學用的激光產品都屬於此類。

4. 絕對不可直視光束，佩戴了護眼用具亦不可以；應使用間接方法觀看光束。不可將光束射向飛機、車輛、反射面或其他人。

5. 切勿嘗試拆除包封激光發射產品的裝置，例如鐳射碟播放機、鐳射打印機、激光切割機及條碼解讀器。

6. 遵循製造商提供的安全使用及維修指引。若儀器有損壞或有任何不妥善的地方，應即通知上司。

7. 遵守所有安全程序、規則、警示及在有需要時適當地使用個人防護設備。不可擅自進入「激光管制區」。

8. 使用或購買 3B 類及 4 類激光產品或主要激光組件，請先向 Departmental Laser Protection Officer 查詢。

9. 未完成激光安全訓練及未經授權的人員不可操作 3B 類及 4 類非包封激光。

10. 經常操作3B 類及 4 類非包封激光的職員、碩士及博士研究生均可申請由大學資助的視力測試。
    Policy on Eyesight Testing for Users of Class 3B and 4 Lasers

11. 若遇緊急情況，通知在附近的人及致電24小時保安熱綫3442 8888或致電999。

設施管理處

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