

小哥哥小姐姐講半導體

晶進未來

新竹高中 賴志賢 宋彥廷 蔡尚逸

動機分享

課程

應用半導體:元件篇

1

認識半導體

2

半導體-二極體

3

半導體-電晶體

4

實作作品

01-

認識半導體

化學元素週期表

1	1 H 氫																2 He 氦	
2	3 Li 鋰	4 Be 鈹										5 B 硼	6 C 碳	7 N 氮	8 O 氧	9 F 氟	10 Ne 氖	
3	11 Na 鈉	12 Mg 鎂										13 Al 鋁	14 Si 矽	15 P 磷	16 S 硫	17 Cl 氯	18 Ar 氬	
4	19 K 鉀	20 Ca 鈣	21 Sc 釷	22 Ti 鈦	23 V 釩	24 Cr 鉻	25 Mn 錳	26 Fe 鐵	27 Co 鈷	28 Ni 鎳	29 Cu 銅	30 Zn 鋅	31 Ga 鎵	32 Ge 鍺	33 As 砷	34 Se 硒	35 Br 溴	36 Kr 氪
5	37 Rb 銣	38 Sr 銻	39 Y 釷	40 Zr 鋯	41 Nb 鈮	42 Mo 鉬	43 Tc 錳	44 Ru 鈷	45 Rh 銠	46 Pd 鈀	47 Ag 銀	48 Cd 鎘	49 In 銦	50 Sn 錫	51 Sb 銻	52 Te 碲	53 I 碘	54 Xe 氙
6	55 Cs 銫	56 Ba 鋇	57 Lanthanoids 71	72 Hf 鈷	73 Ta 鉭	74 W 鎢	75 Re 錳	76 Os 鋨	77 Ir 銥	78 Pt 鉑	79 Au 金	80 Hg 汞	81 Tl 鉍	82 Pb 鉛	83 Bi 鉍	84 Po 鉈	85 At 砹	86 Rn 氡
7	87 Fr 鐳	88 Ra 鐳	89 Actinoids 103	104 Rf 鐳	105 Db 𨨍	106 Sg 𨨍	107 Bh 𨨍	108 Hs 𨨍	109 Mt 𨨍	110 Ds 𨨍	111 Rg 𨨍	112 Cn 𨨍	113 Nh 鉈	114 Fl 鉈	115 Mc 鉈	116 Lv 鉈	117 Ts 鉈	118 Og 鉈

1
H
氫

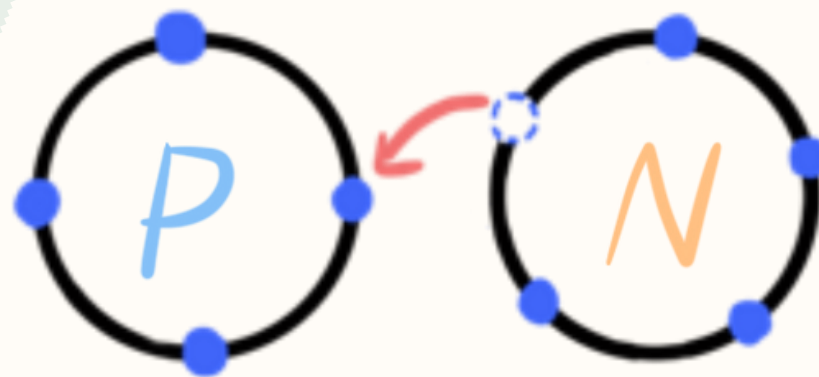
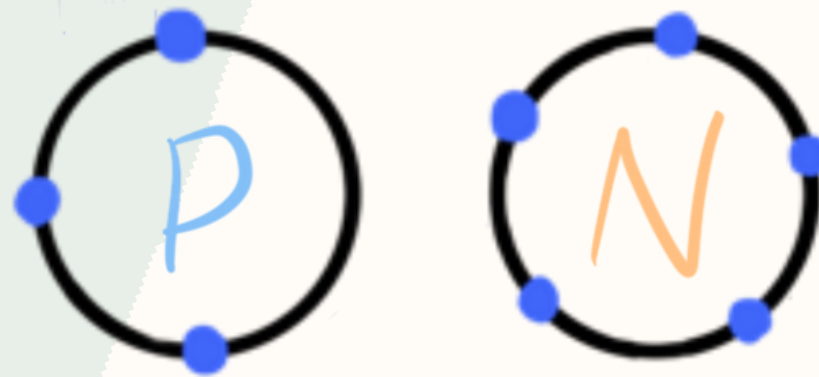
..... 原子序

..... 元素符號

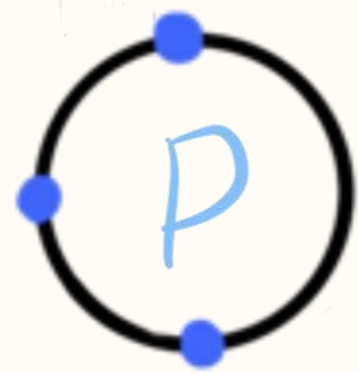
..... 元素中文名

3A

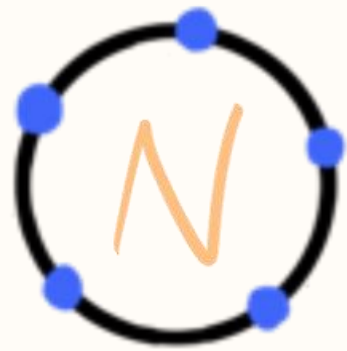
5A



02- 二極體



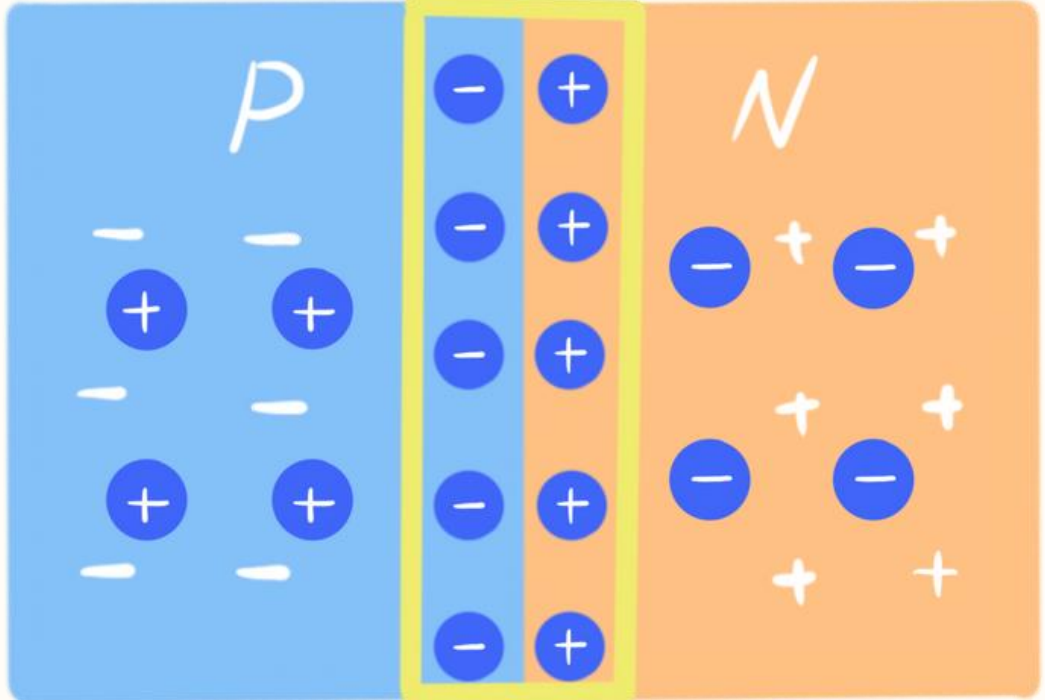
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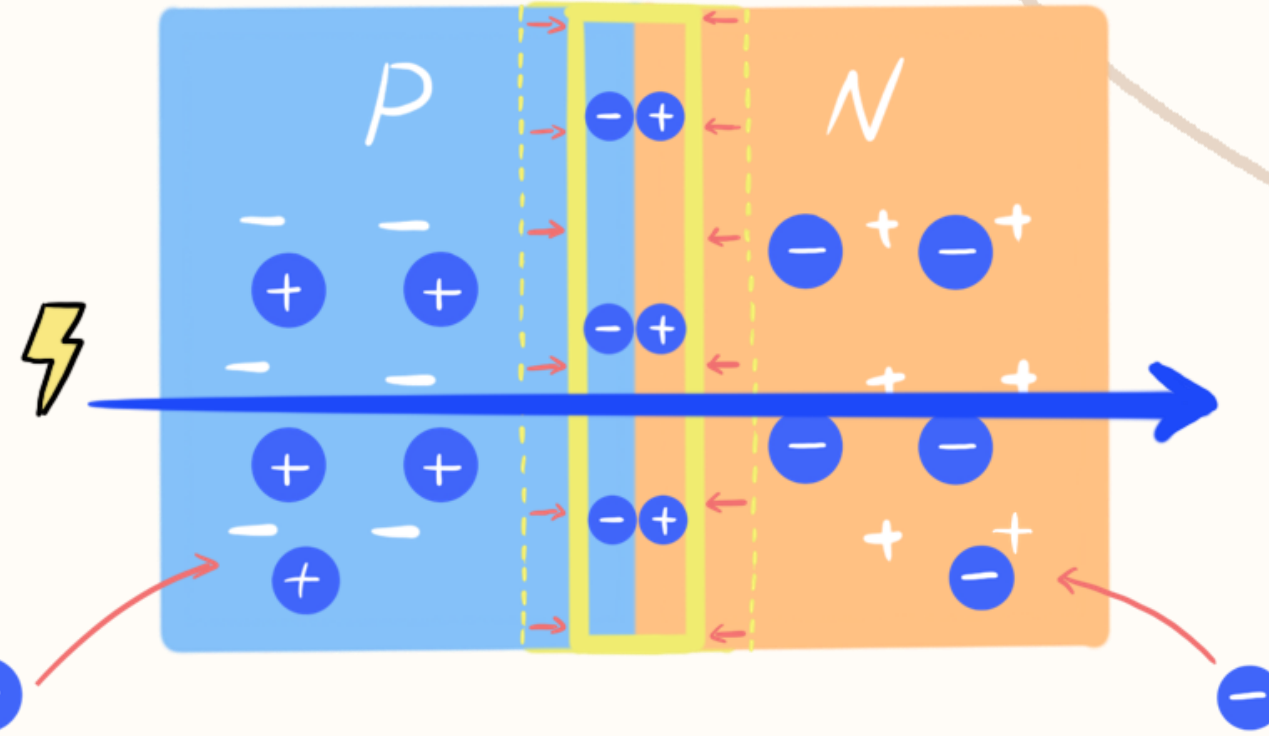
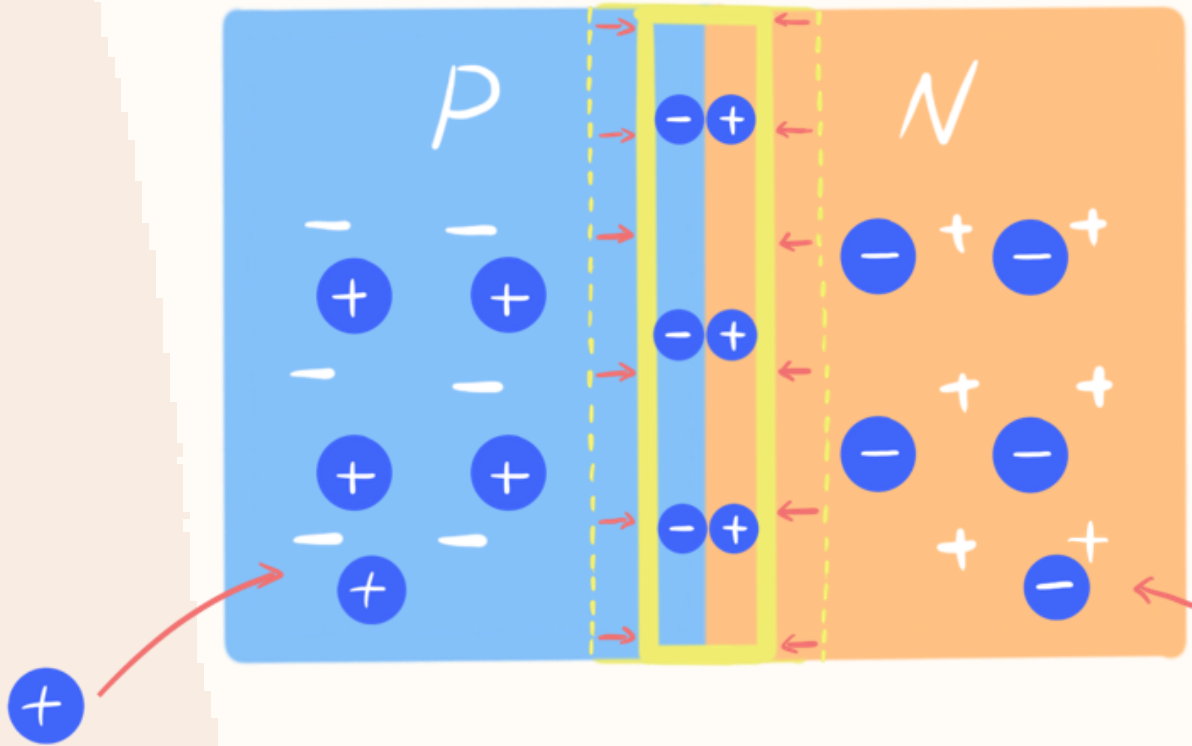
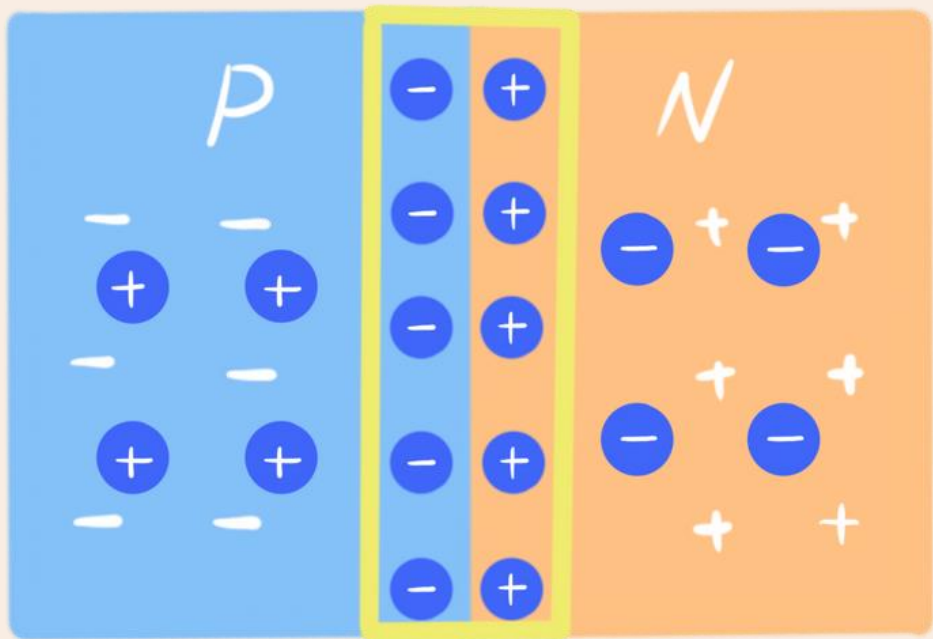


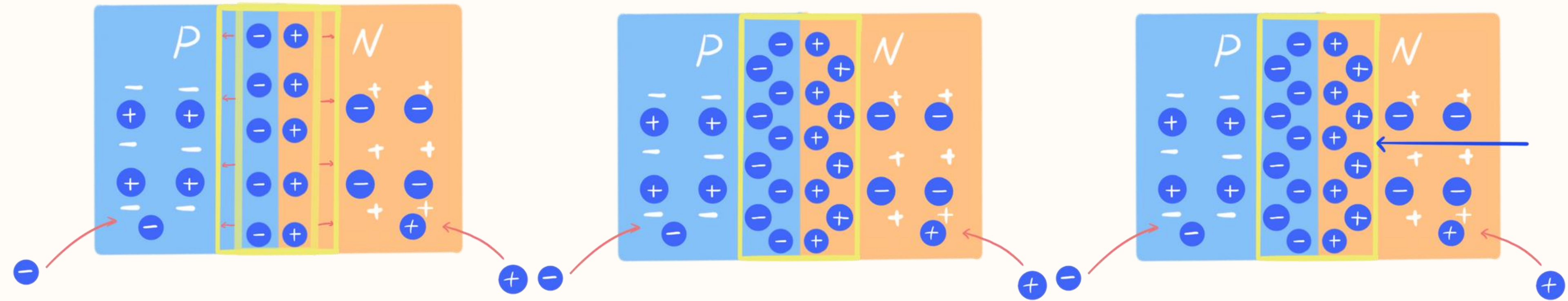
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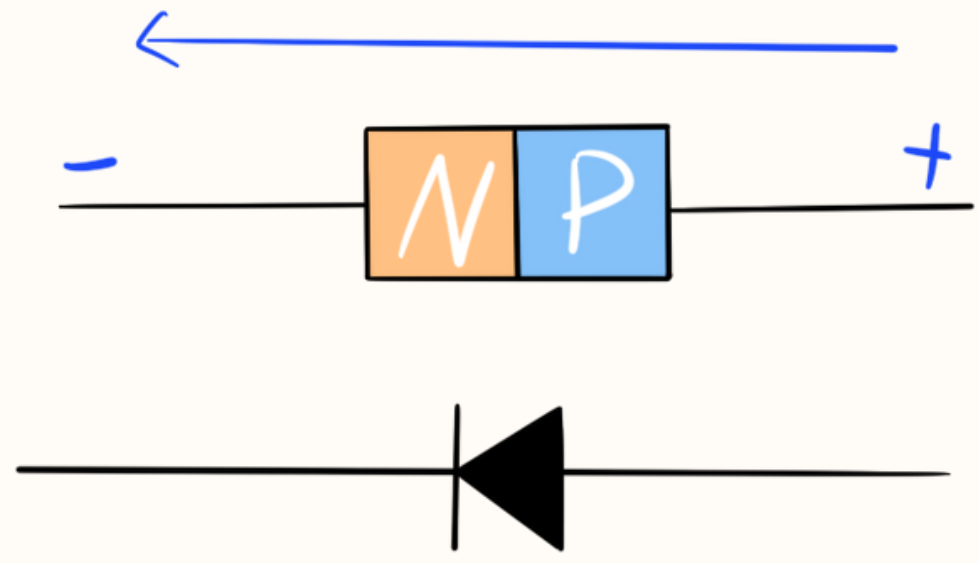
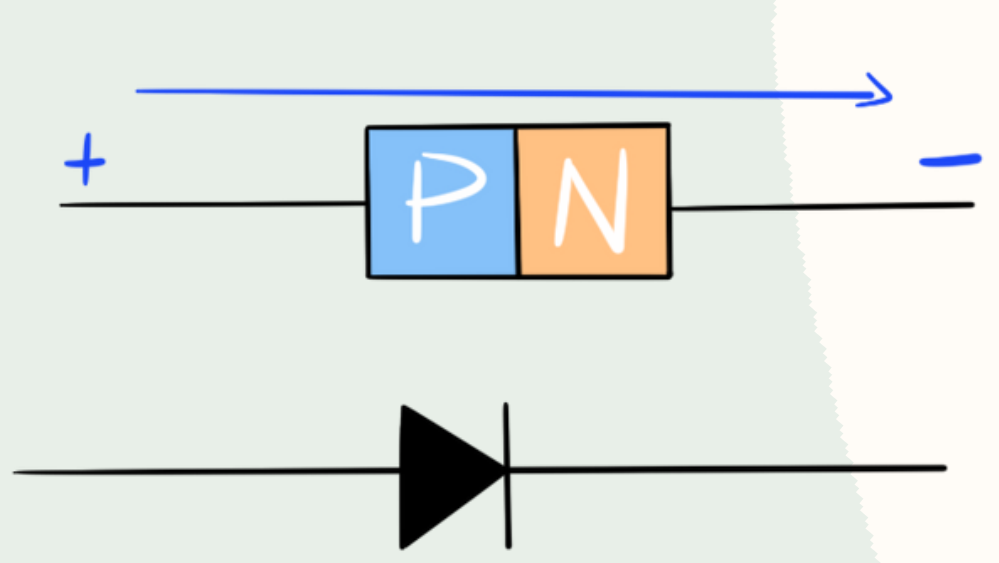


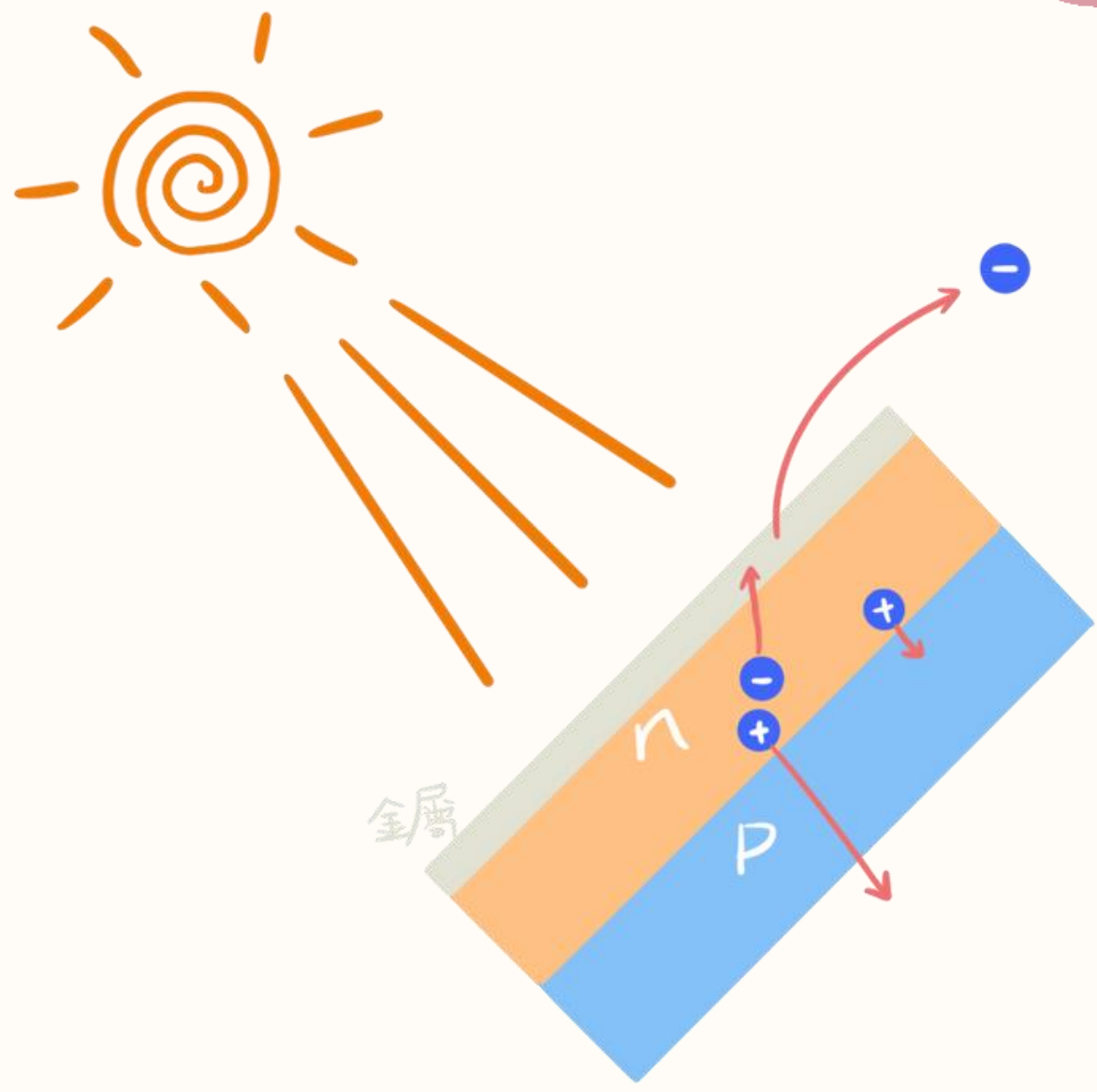






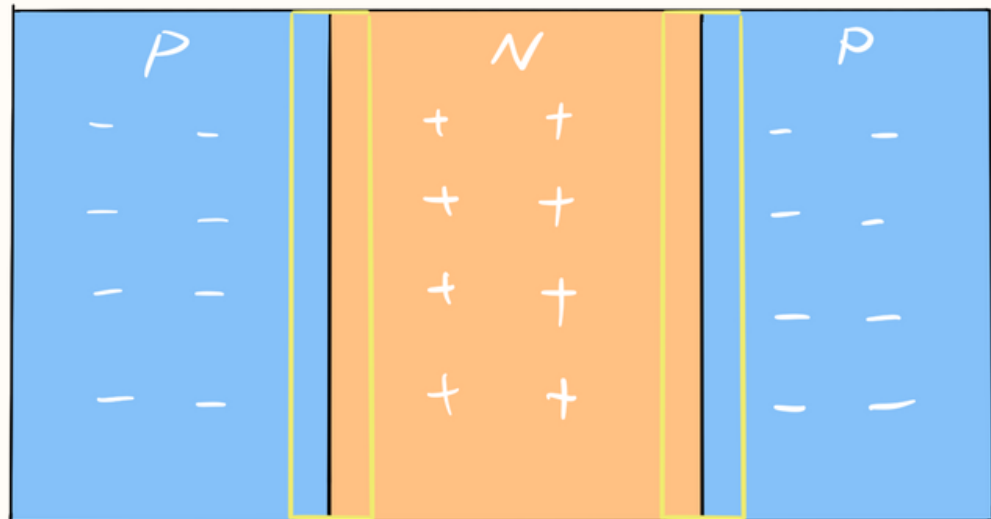
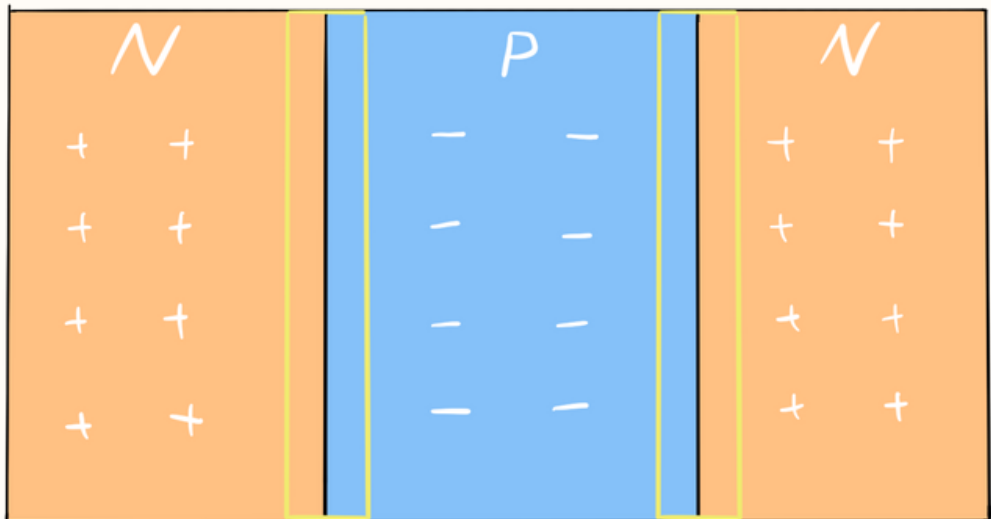






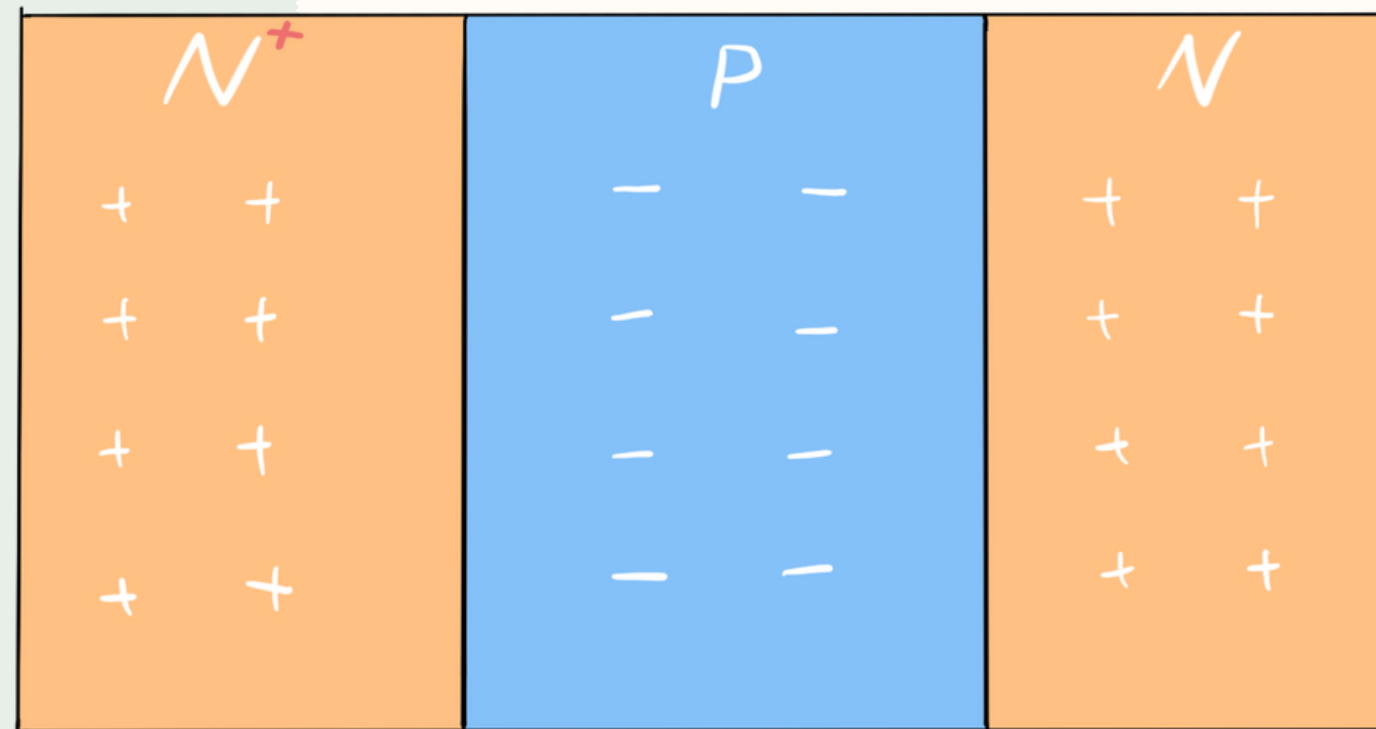
03-

電晶體介紹



發射電洞

射極
Emitter

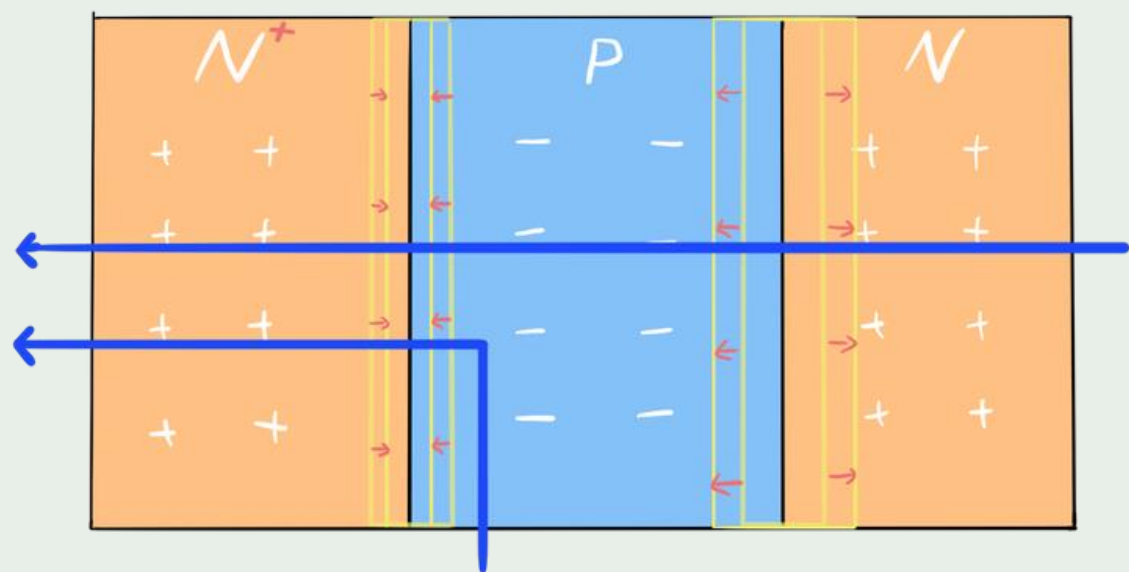


基極
Base

集極
Collector

蒐集電洞

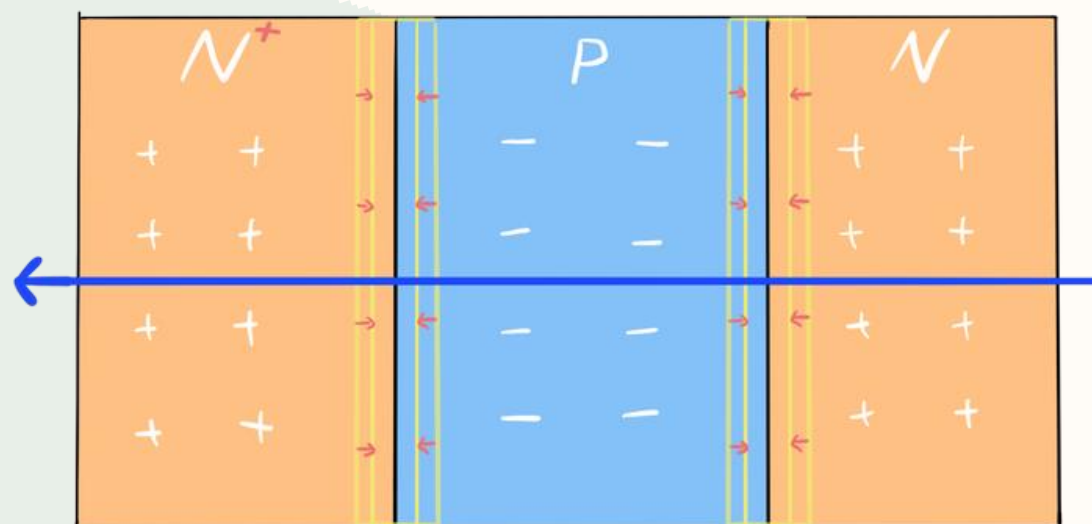
主動模式



順向偏壓

逆向偏壓

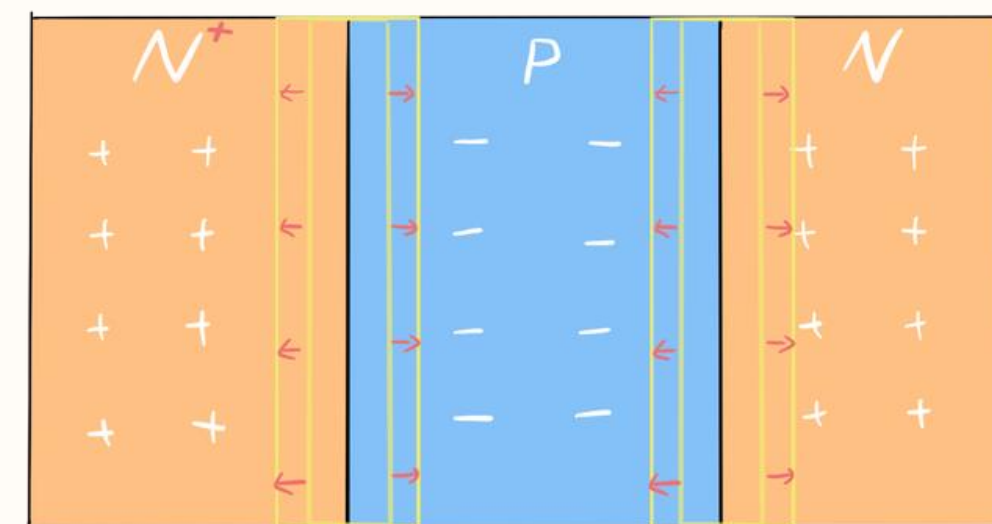
飽和模式



順向偏壓

順向偏壓

截止模式



逆向偏壓

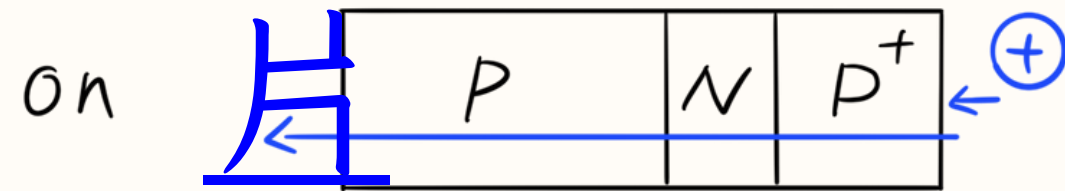
逆向偏壓



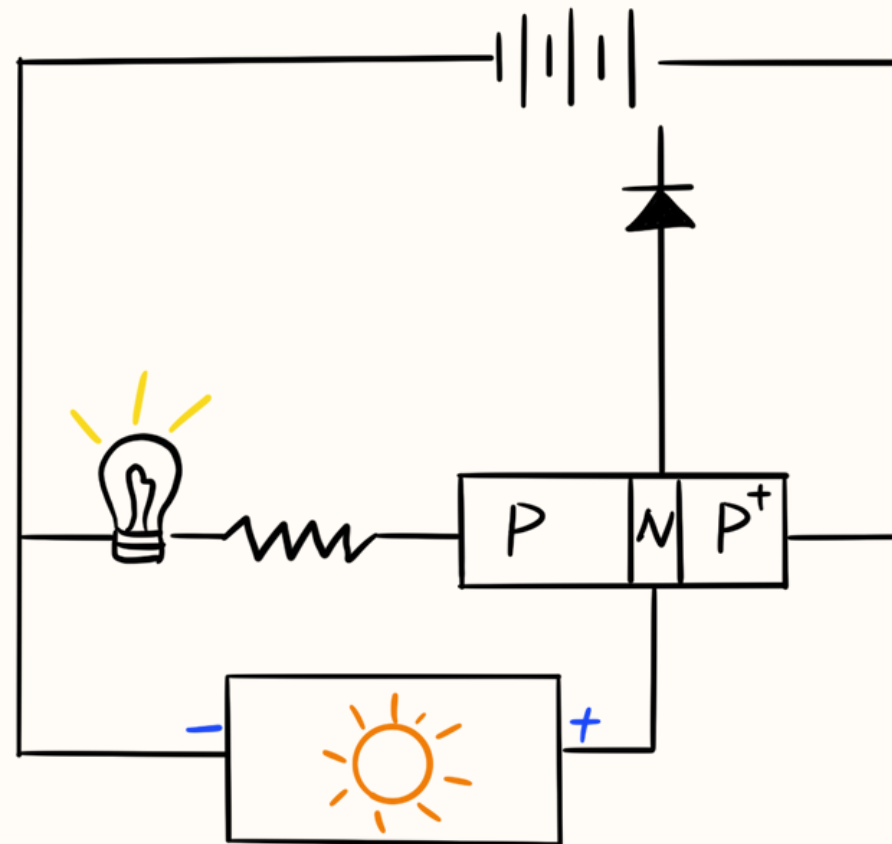
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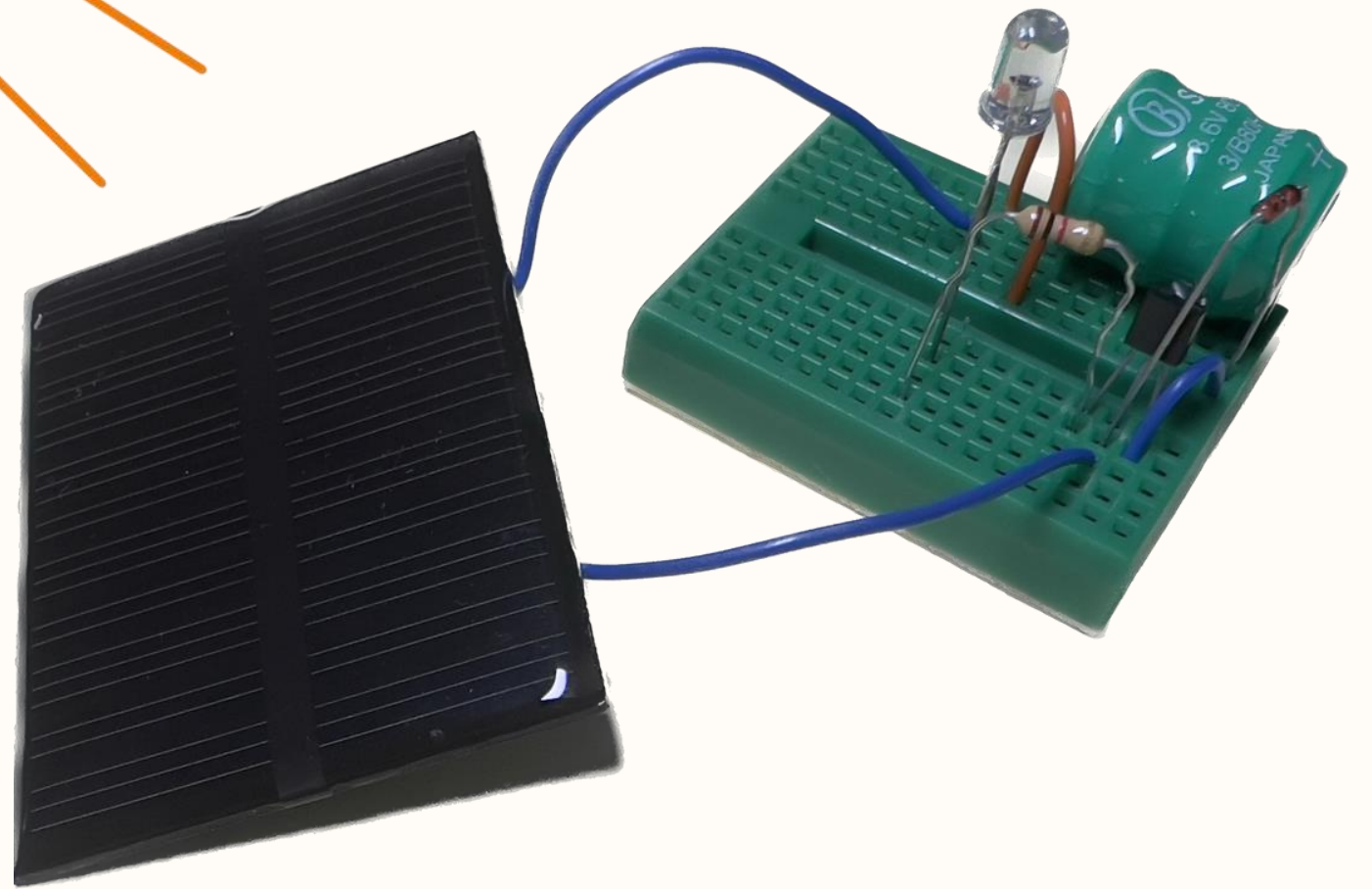
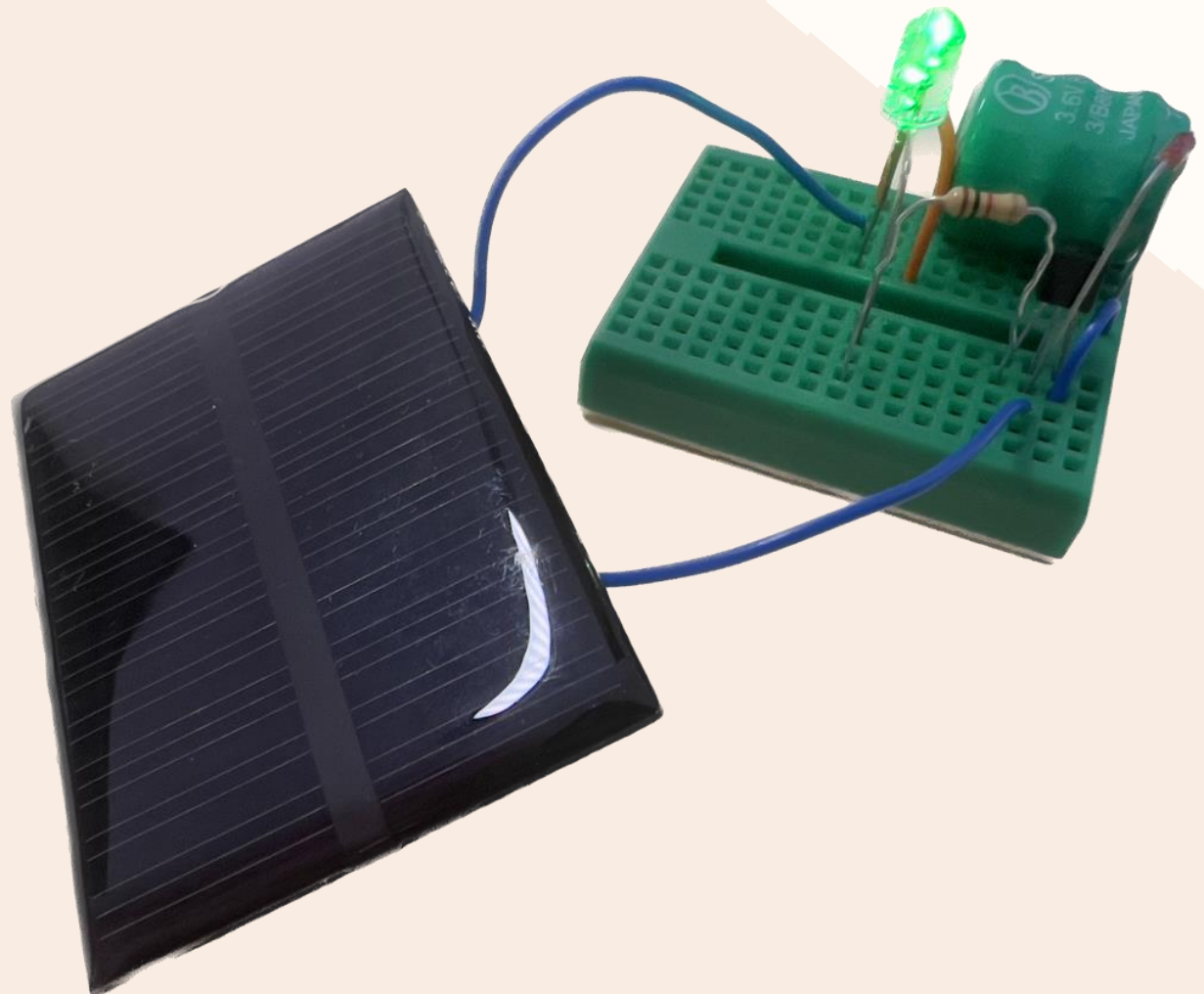
實作作品

作品影



off





心得分享

Thanks for your listening!